EVERYDAY PROBLEMS *in* TEACHING

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EVERYDAY PROBLEMS IN TEACHING

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By

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Aspects of Mental Economy

Education as Adjustment

Dynamic Factors in Education

Linguistic Development and Education

Social Development and Education

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PREFACE

The character and purpose of this book may be best indicated by describing in a word or two how it has been developed. For a number of years I have been accustomed to write out a rather detailed account of examples of effective teaching or the reverse which I have observed in any department of education, from the kindergarten to the university. During this period I have had opportunity to inspect teaching in many sections of the country, and in a variety of schools, with the result that I have accumulated a considerable number of instances of actual school work, with comments thereupon; and I have been able to test the value of the methods employed by actual trial upon a group of children whose training has been committed to my care. This volume is composed mainly of the more typical and practical of these concrete examples of teaching, together with discussions of the principles involved. The treatment throughout is based almost wholly upon the description of typical lessons, given in sufficient detail to indicate the aim in each one, and the method of attaining it.

In respect to style, it has seemed to me desirable to use rather simple sentences for the most part. When one is elaborating theory without regard to immediate application, complex sentential construc-

tion will serve his purpose best. But when one is aiming to interest the practical teacher, his sentences will probably have the best effect if they are not very intricate. Involved sentence structure suggests absorption, with inhibition of action. But the teacher must have an active relation toward the problems of the school-room; and a style that will stimulate dynamic attitudes will undoubtedly achieve the best results. If one were writing for philosophic students he would, of course, employ a style different from the one adopted in this volume.

For the purpose of influencing practice most effectively, it seems to me one must make frequent pauses in the discussion of any theme, so that when the practitioner has appreciated a given point he may proceed at once to test it or to apply it. Then he may come back the following day or week without feeling that he must start at the beginning in order to comprehend the next point. The practical teacher ought not to have to go entirely through a book before he discovers what are the principles to be applied. This would be quite proper for a student who is interested in gaining only a theoretical view of a situation, which sometime later he may be able to work out in its concrete bearings. But in this book the needs of the philosophical student pure and simple have been taken account of only in indicating how a given theory of teaching may be applied in specific, concrete instances.

While a strictly theoretical treatment of teaching is not likely to be of interest to the practitioner, and not apt to influence his action, nevertheless concrete

instances should be at least loosely unified under large principles of method. To illustrate: I have discussed a number of examples of teaching under the general heading, "Teaching Pupils to Think." While it is not necessary for the reader to go entirely through this chapter in order to appreciate the point of view which is developed, and while he might stop in a dozen places and test the principles presented, still all the points made relate to the general problem of teaching so as to develop an original as contrasted with a mnemonic type of mind. And what is true of this chapter is true of most of the chapters in the book.

In this volume the point of view is maintained that effective method requires that the pupil work out problems for himself. I have endeavored to observe this doctrine by giving a number of Exercises and Problems requiring the testing of each principle developed, and the application of it in a variety of ways.

In the appropriate place I have given lists of references relating to the principles developed in each chapter. I have aimed in these lists to suggest books and articles easily accessible to most teachers, and written from the standpoint of contemporary educational thought. In the index I have sought to analyze the entire material of the book, and to indicate, either by direct or by cross reference, every point considered in any chapter.

It is a pleasure to be able to say that I have frequently discussed the various principles presented in this volume with my assistants in the University

of Wisconsin, Charles D. Bohannon, William A. Cook, Edith E. Hoyt, and Guy F. Wells, all of whom are thorough students of modern education, and who have had extensive and varied experience in practical teaching. In many ways I have profited by their good judgment and assistance.

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EVERYDAY PROBLEMS IN TEACHING

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CHAPTER I

PROBLEMS OF SCHOOL-ROOM GOVERNMENT

The importance of good order

It is safe to say that the majority of teachers go into their schools every September worrying more about one particular problem than all others combined; and this is the problem of government in the class-room. Probably nine out of ten trustees and members of boards of education esteem *good order* more highly than anything else in teaching. In some communities the only school topic that is discussed is the order which the teacher keeps. He is regarded as a success just in the measure that he can make the children "mind", or "toe the mark". Perhaps this is as it should be, for "order is Heaven's first law"; and it must be the first rule of the school, as most people think.

In a very real sense, good order is absolutely es-

sential to a healthy tone in a school, or anywhere else, for that matter. It requires that people, young and old, must so control themselves that all can perform effectively the tasks in hand. When a group of persons are out of order, they can not pull together; they interfere with one another, and both time and energy are wasted. Moreover, in the case of the young, bad habits may be formed which may later make it impossible for them to adapt themselves to the laws and rules of the society in which they must live. So it is not surprising that parents and school officers have placed good order above every other consideration in teaching. It shows they have appreciated, with greater or less clearness, the fundamental necessity in human society, whether in the school-room or outside.

The methods of an earlier day

Memory carries the writer back to the district school in which he had his first experience in teaching. There was a painted line running across the floor in the front of the room. This had been used by a whole generation of predecessors to secure good order in their recitations. Whenever a class was called, the pupils came forward, faced the school, and "toed" this line, with their feet turned out at an angle of 60°, face to the front, and hands held behind the back, except when one was needed to hold a book. It was the custom

then to insist on rigid motor restraint on the part of all children in every recitation. The teachers of the day gave more attention to government than to instruction proper. They used to have "disciplinary" periods, when all pupils were required to sit erect in their seats for fifteen minutes at a stretch, with arms folded, and every muscle tense. All communication during school hours was forbidden. Not even a friendly word now and then with one's seat-mate was permitted. Quiet and dress-parade behavior were constantly striven after. And yet there was a great deal of bad order in the schools, of which this one was typical. The pupils were fidgety in spite of the frequent chastisements; and they seemed often to be looking for a chance to start a rebellion. The teacher lived in continual fear of revolt in those schools; and not infrequently he was compelled to make a hasty and unconventional exit from the school-room, being aided thereto by the "big boys" in the school. At best there was a continual armed neutrality in the typical district school of New York State twenty-five years ago.

But to-day there is a very different tone in the school referred to. A new school building has replaced the old one, and the painted line has disappeared. One does not hear much now in that community about the teacher's keeping order. The pupils

have grown better. They are happier in school than they used to be, speaking generally, and they have a genuinely agreeable time with the teacher. Rarely now is a child whipped, whereas, in an earlier day, a school without frequent floggings was quite exceptional. Some of the readers of these pages can probably bear witness to the fact that during the last quarter of a century, nothing short of a revolution has taken place in the relations of teachers and pupils in the rural schools of the United States.

The factors which have produced a new régime in respect to school government

What has been responsible for this change? It has come about as a result, mainly, of two forces acting together. In the first place, there is now more interesting teaching of more vital studies than there was formerly. And in the second place, teachers to-day permit a greater indulgence of the spontaneous activities of pupils than they did formerly. It is believed now by most people that good order does not require the too rigorous suppression of the impulsive actions of the young. There seems to be reason in this latter point. I ask a five-year-old to look at a pair of stairs, and he is likely to begin going through the process of climbing stairs. If I show him an engine, he puffs; a dog, he barks; a lion, he roars; and so on *ad libitum*. What goes in through

the senses is apt to run straight to the muscles, so that the child whose mind is being actively stimulated, can not keep "absolutely still" but for very brief periods at a time. Speaking generally, the older one gets, up to maturity, the more controlled he becomes—the steadier, the better poised, the better behaved. The increase of experience makes him so. The secret of it all is that a great blocking system gradually gets established in the central nervous system, and in consequence energy may be turned aside from special motor routes in ever-increasing quantities.

What, then, is the practical word for discipline? First of all, *hold the attention of your pupils.* The moment you lose their attention the energy will flow back into their muscles, and you can not make a law which will prevent the inevitable "restlessness" which will follow. And how can you hold their attention? Mainly through the vigor, concreteness, and liveliness of your teaching. You never saw disorder in a room where there was magnificent teaching going on. Conversely, you never saw good order for any length of time where there was weak teaching. Put this down as the primal law of good order.

In nine cases out of ten, probably, a pupil who does not attend to the activities of the school is sim-

Problems in securing and holding attention

ply dominated for the time being, or perhaps permanently, by unrelated trains of thought, or feelings which are the results of recent experiences. Suppose, for instance, you have a class in history, to which the pupils come direct from a class in English literature. Let us say that the topic for discussion in this last class was interesting to all the members, and made a deep impression upon them. It stimulated their emotions, which, of course, tended to persist after the inciting stimuli were removed. The pupils come into your class, and your teaching does not arouse lively feeling, but instead fails to awaken much response in either the thought or the emotional attitudes of the students. The impressions made in the preceding class, having established themselves in consciousness, are determining the trend of thought of some or all of your pupils. It is a fundamental law of human nature that an individual will yield to the most persuasive and potent appeals to consciousness. In no other way could he adjust himself to the world in which he lives. Sometimes, of course, it would be better if he resisted stimuli that appealed to him strongly; but the law is that he can not on his own volition make unimpressive, uninteresting, and dull things seem to be of importance. This is the task of the teacher. It will not do simply

to say: "Give me your attention", or "If you don't attend, you must leave the room", or anything of the kind. These latter expedients may temporarily arouse attitudes which will hold the distracting emotions in check; but this inhibition will not last long if there is nothing else to awaken strong feeling, and so to claim the attention.

There are many details respecting the arrangement and conduct of a class which tend to favor the persistence and domination of interests foreign to the work of the hour. If significant noises are made anywhere within the hearing of pupils, they will be likely to arouse irrelevant trains of thought and feeling. Continuous and more or less undifferentiated noise, as the roar of a waterfall, the sighing of the wind, etc.,—noise that does not suggest any particular past or anticipated experience to pupils, is much less distracting than periodical noises which awaken curiosity, as of people walking or talking in the hall outside the class-room, and the like. Any sound or any movement striking on the pupil's senses, and which has been associated with some interesting or vital incident in his life, will be likely to shunt him from the concerns of the class-room into irrelevant trains of thought. Human nature is constructed on this plan, which is carried through most completely in the early years.

The influence of the eye upon a pupil's attention

There is another source of distraction found in many school-rooms. A pupil may sit in his seat hidden from the view of the teacher by heads in front of him. Now, it is a simple matter of human nature that the moment you lose the eye of pupils, you release your strongest hold on them. Under such circumstances, the chances are that the stimuli you are presenting to your class will soon become impotent, and the more interesting experiences outside will get the upper hand in their consciousness, with the result that their attention will wander. Often pupils (usually those who are least strongly attracted by the work of the class) occupy corners of the class-room remote from the teacher, so that his personality as revealed through his eye, the timbre of his voice, and the changing expressions of his features can not play upon their extra-school emotions and trains of thought, and hold them in check. Of course, if the teacher could make his work of such absorbing interest that it would awaken profound emotional states, it would hold the wandering pupils anyway. But generally the new thing one must present in the class-room very much needs reinforcement by every possible expressional accompaniment of voice and face and eye, (which is perhaps the greatest factor in discipline)

and even bodily attitudes, in order that it may capture and hold the attention of pupils.

Cultivating distractions

The coming and going of people in a class-room after the work has started is always a source of confusion. Once the signal has been given for beginning the duties of the hour, no one should be admitted to the class, except on the most urgent business. The practice in some schools of allowing any one to enter a class any time he pleases is wasteful, and destructive of attentive attitudes on the part of pupils. Sometimes principals have the habit of sending messages to teachers while they are conducting classes, with the inevitable result that a general air of distraction is spread throughout the entire school. When a teacher is given a message by the janitor, all pupils set to work to figure out what it contains. It is safe to say that every message a teacher receives during the progress of a class wastes at least five minutes of the pupil's time; and it may spoil the whole hour.

An open door of a class-room may keep an entire class in a constant state of distraction, if there is any activity whatever going on in the hall without. It is inevitable. Groups of adults even are always interested in people who come late to meetings, or who pass by an open door of the room in which they are congregated. It is a law of human nature, as

true of college faculties as of high-school or elementary-school pupils—that people who are in action about us attract our attention. It is a more or less automatic and perhaps instinctive reaction, which makes it all the more difficult to control.

In some schools the doors of the class-rooms are provided with glass panels, so that a principal, superintendent, or visitor may at any moment look in to see what is going on. Usually the doors are in such a position that the inspector can peer into the eyes of the pupils, and the pupils can look at the visitor, which is exactly what they will do as long as he has his face glued to the panel. One sometimes hears it said that pupils will easily get accustomed to this sort of thing; but the experiences of daily life show such a statement to be, as a rule, false. It would be entirely justifiable for a teacher to hang curtains over the glass panels in the doors of his class-room, provided his superiors do not object too strenuously. He could certainly do better work by eliminating all distracting influences of this character.

The method of seating pupils is often a source of distraction in a class-room. Arranging pupils in a semicircle so that one member may see the faces of the others when they are reciting, greatly favors attentive attitudes toward the work in hand. When a

pupil sits at the rear of the room for an entire hour, gazing only at the backs of the heads of his classmates, thus rarely seeing their countenances when they are talking, and being remote also from the teacher, the chances are he will not give his attention long to the duties of the hour. Moreover, when a pupil who is not performing can see the expressions of the one who is, he receives a constant stimulus, which otherwise he would miss, to give heed to what is being said.

Again, when pupils sit next to those of their associates with whom they have lively experiences outside of school, it is probable that these extra-school interests will become supreme in consciousness while they are in the class-room. The mere physical presence of intimate friends stimulates communication along the lines of their typical experiences in the world. This is important at every stage in life, but it is particularly so in the early years. The teacher, then, who expects to secure attention from all her pupils must devise some plan whereby they may be distributed over the room so that cronies will not sit within communicating distance of one another.

A feasible and effective remedy

It has already been said that a school must be kept in order or teaching will be impossible. At the same time, any attempt at rigid suppression of communication will

aggravate rather than cure the malady. Is there any way to harmonize these difficulties? Many teachers are solving the problem to-day by a simple and wholesome method. In substance it is this: pupils are required to apply themselves to the tasks of the school for brief periods only; in the primary grades not longer than fifteen, or at the outside twenty minutes at a time without relaxation. During the intervals of three to five minutes, pupils may communicate freely. They may move around as they choose, and in a sense be in complete disorder. In this way the impulse to communicate is gratified for the time being. The experiences of the preceding hour are communized, and the children are relieved of the tension which otherwise would be difficult if not impossible to endure.

A teacher who has not tried the plan of having brief periods of concentrated application, followed by short periods of complete relaxation, has not yet discovered how best to accomplish the tasks of the school, and at the same time to work in harmony with the nature of the child. Literally thousands of years of experiment in teaching give warrant to the proposition that it is impossible to conduct an ordinary school by keeping young children rigidly restrained for an hour and a half at a time. When the attempt is made to do this, it is apt to result in

conflict between teacher and pupils, to the disadvantage of both. If any reader who has not tried the plan suggested will do so, let him have his pupils first clearly understand that while they are engaged in study they must apply themselves with all their energy, and then there will be opportunity for perfectly free play and social intercourse. We could accomplish more in every way—in the intellectual advancement of pupils, in avoiding conflict between teacher and pupils, in forming good habits of study in the school-room, and in making the school a happier place for children—if we could work along the lines indicated above.

Relaxation periods are of value, not only in reducing the evil of irrelevant communication, but they are chiefly of service in releasing nervous tension, which is always a source of trouble in a school-room. A child who is in a tense condition usually makes a dull and disorderly pupil. When the majority of the pupils in a room become tense, it is a well-nigh hopeless task to do any effective work with them. For one thing, they become restless; they move about aimlessly and impulsively to relieve this tension. One can not "sit still" for any considerable period when his muscles are constrained. Nature urges him to conserve his

A potent cause of dullness as well as disorder in the school-room

nervous energy by changing his position, with the result that his tensions will generally be released. Observe an audience that has been attentive for an hour, say. Note the purposeless movements beginning to appear; and they are apt to increase until they may amount to disorder. What does an experienced orator do in such a situation? He tells a humorous story, which relaxes the muscles of his auditors, and so really rests them, and helps them to gain possession of themselves again—to become *orderly,* that is to say. The teacher may learn something from the example of the public speaker. When she finds her room becoming disorderly she can give a short recess, as suggested above, allowing her pupils to be free to do as they choose, barring vicious or lawless conduct, of course. Preferably they should go out-of-doors for a two or three minutes' run. This will be adequate for the purpose of relaxing the tense muscles, filling the lungs with fresh air, and quickening the circulation. Do not hedge your pupils about with restrictions during these relaxing periods. You must let their wills follow the lines of least resistance; which means that you must not keep their attention upon the observance of rules, commands, or directions. Hold their attention just as long as you think advisable to the regular studies in your program, then let it go absolutely

for a brief period. This is the most effective and economical method of procedure.

Children in the first two or three grades ought to have frequent relaxing periods—every twenty minutes probably. It would doubtless be desirable if one could so arrange the regular work that there would be a variety of manual activities which children would take up after every abstract study, for these would serve to "unclamp" tense muscles. But even with such an arrangement, children must have a few minutes for spontaneous play several times during each session. Pupils in the higher grades should have short recesses at least after every forty-five minutes of mental work. It would be better if they could be given three minutes' relaxation after every thirty minutes' attention to their studies.

Frequent relaxation periods absolutely imperative

Have you ever visited a school-room at half-past eleven, say, when the teacher and the pupils alike were irritated because they were fatigued? If so, you doubtless saw one of the most serious situations arising in school work. It is safe to say that the pupils were continually "getting out of order", and the teacher's time and energy were devoted largely to disciplining refractory individuals. There was much scolding and threatening; the teacher's voice was irritating, and she complained frequently about the be-

havior and work of the pupils. There was certainly reason for her unhappiness, since the pupils were making mistakes in their problems, their spelling, and so on. All the investigations upon school-room fatigue have emphasized the tendency of pupils in this condition to overlook errors in their work. They can not attend closely to what they have in hand, and so inevitably they make blunders. They are likely also to be "careless"; they may blot their copy-books, drop objects on the floor, knock their feet against the sides of their desks, and so on. Sooner or later the teacher becomes disturbed by all this "racket", and then she only aggravates an already bad condition of affairs. Do you not see that most school-room tragedies occur at such times, when both teacher and pupils have lost control of themselves in some measure?

If you are at any time placed in such a situation, try the plan of telling your school some interesting story, if you can not grant a recess. Have you ever observed the effect upon a disorderly school of a good song—one that must be sung standing, and that pupils "throw themselves into" with spontaneous enthusiasm? It is oftentimes very helpful to open windows and take breathing exercises, as deep as possible, for three minutes. Let the pupils "sound their lungs" while they inspire; it all helps

them to unclamp. I have seen a disorderly school brought back to reasonable order by this simple expedient. No one became angry, and the whole situation was much better than if the teacher had proceeded on the principle that pupils could be self-controlled *if they only would,* and what they needed was to have their wills stimulated. Experiments have shown that in conditions of fatigue the will becomes more or less erratic, and an individual can not really do what in better times he would easily do. We are coming to see that the will requires good physiological, and especially good nervous conditions in order to operate effectively on all occasions. Do not call pupils by harsh names, implying deliberate, wilful viciousness, when they lose their inhibiting power; but try to establish in them nervous stability again, and if you succeed you will find that ordinarily they will adapt themselves readily to the rules and regulations of the school.

A concrete instance of a disorderly school

Recently the writer had an opportunity to make some observations in a class-room in which practically everything was going the wrong way. The children were unusually "restless", and they seemed unable to apply themselves to their tasks. For the one hour I was in the room the teacher was charging her pupils with various sorts of shortcomings. According

to her representations, they were mischievous, disobedient, lazy; and in short they were unfit to be in the school at all. There was apparently some justification for these complaints, because the children did very poorly in all their work. In a class of twenty pupils reciting in geography, not one understood the lesson so that he could recite intelligently upon it. Most of the children were apparently altogether ignorant of practically everything in the lesson. This irritated the teacher greatly; and in voice, face, and manner she expressed her extreme displeasure. This stirred up all in the room so that every one was more or less unhappy. In most of the recitations the children were "stupid". They made errors frequently, and they recited slowly and disconnectedly in all studies.

This particular class of pupils had not acquired the reputation for being dull or disorderly under other teachers. On the contrary, there were a number of bright pupils in the room; but on this occasion they seemed as obtuse as their classmates. What conditions could have produced such an unfortunate state of affairs? One did not need to remain in the room long in order to discover certain prominent causes for the tumult and disorder which were so apparent. In the first place, the teacher was in poor health. The first time the pupils saw her

some of them remarked upon her emaciated appearance. They even said they did not believe she had sufficient strength to teach school. She had not gone far in her work before she contracted what she called a cold, which probably was caused mainly by fatigue. Thinking it to be a cold, she insisted upon having all the windows and doors of her room closed continually. She would not permit them to be opened during intermissions even. As a consequence, the air of the room was insufferable. One thing which irritated the teacher was the yawning of the children. She said in effect several times during the hour of my visit: "Stop your yawning and get to work. If you were interested in your lessons you would not be going to sleep in your seats." Two of the children complained of headache, and the teacher charged them with being lazy, and wanting to escape from their tasks. The relations between herself and her pupils became so tense that no effective teaching could be done in the room.

It seems hard to say it, but it ought to be said that a teacher in such a physical condition as this particular one ought to be debarred from the schoolroom. It is not right that forty children should waste their time, and be exposed to treatment which is likely to develop what is mean and irritable in them. On the teacher's side, if she finds herself be-

coming excessively fatigued, it will be the part of wisdom for her to stop short until she can get enough strength to conduct the work of her class as it should be done. If she is in such a frail condition, or in such a state of mind that she thinks she can not endure fresh air, then she certainly ought to stay out of the school-room, and not subject pupils to conditions which will injure them physically and develop in them antagonistic attitudes toward the life of the school.

The teacher's relaxation

The writer recently inspected a Western school in which he found a room devoted exclusively to the use of the teachers while off duty. It was attractively though simply furnished, and it suggested rest and relaxation. When the teachers have a free period, they go there if they choose; and it is said to be a very popular place. The teachers agree they can teach more enthusiastically the latter part of the day, if they can be at ease for a half-hour some time during the session.

On a strictly economical basis, it would pay to have such a room in every grade and high school. Teachers are human; and the human machine is so constructed that periods of high tension must be followed by periods of low tension, if the machine is to work most effectively. When the teacher is before his class, every faculty should be alert. He should

be dynamic, and at the same time self-controlled and well-poised. But when the class is dismissed, he should at times be able to slip out of the class environment into a different one, where he can "let down".

It is better for students and teachers that they should be apart some of the time during every session. The rest-room affords the teacher a bit of club life, of a mild sort, of course, during the day; and his work will be the fresher and the more vital for it. He is more likely to be interesting, and less likely to be "cranky" and irritable as the day's work draws to a close.

But we have inherited the notion that teaching is a very serious, austere business; and while on duty teachers ought not to relax. This notion is not well-defined, it is true, and many who really appear to believe it will not acknowledge it when it is plainly stated, as above. A certain superintendent of schools in a good-sized city affords an illustration of the point in question. The rest-room idea was mentioned to him, but he did not warm up to it in the least. He offered some scattered opinions on the general subject of the attitude of the teacher toward his work; and the sum of his remarks was that a teacher who had the right spirit would wish to remain in his class-room when he had a free period,

looking over papers, and preparing himself for coming events. Being led on, he said he thought a teacher ought not to attend a party of any sort, except on Friday or Saturday evening; and once a week was a liberal allowance.

Now, this is taking too stern a view of the teaching business. The superintendent referred to is a thoroughly honest, sincere man, who is anxious to do the very best he knows how by the children of his city; but he is not so keen a student of human nature as he might be. He places more emphasis than he should on *mere work* on the part of the teacher. He does not value freshness and buoyancy in the class-room as highly as they deserve. Moreover, he does not understand the principles of economy and efficiency in mental effort, for if he did he would see that more work can be accomplished if periods of relaxation follow periods of application quite frequently. This matter has been carefully and extensively studied as it concerns pupils in the school-room; and the principles established apply to teachers as well as to students.

The stormiest season of the school year

But we have not finished yet with causes of disorder in pupils. There is a popular theory that they do their poorest work in the spring. It is commonly said that after the long winter's work children are fa-

tigued; and when the snow commences to melt, they begin to long for the freedom of out-of-doors. Some investigations made at home and abroad tend to show that children do fatigue more easily in May than in November, which is undoubtedly due to the fact that during the school session they expend nervous energy more rapidly than they generate it, resulting in a gradual lowering of vitality and endurance, so that the machinery of life does not run so smoothly or so easily as when the pressure of energy is high.

But with all the disadvantages of teaching fatigued pupils in the spring, it is probable that there are still greater disadvantages of teaching ill-adjusted ones in the autumn. Have you not observed how restless and inattentive pupils become when the thermometer begins to remain below the freezing point during the day? Then the windows of the school as well as of the home are kept closed, so that pupils breathe only artificially-heated air, oftentimes superheated and filled with irritating dust. This air is usually very dry, and is quite different in its effects upon the nervous system from the sun-heated air out in the open. Then, in the autumn pupils become adapted only slowly to the régime of the school, for they are entirely unaccustomed to the long hours of sitting required therein. Throughout the summer

months they are, as a general thing, very active muscularly. Every vital organ is as a rule healthfully stimulated through constant physical exercise. In an active motor life, the lungs are fully inflated thousands of times every day, while in school they may not be properly expanded once during the whole session, with the exception of the few minutes spent on the playground. The digestive and eliminative systems suffer most under the restraints of the school, especially during the period of readjustment. The muscular system, which in a growing child craves exercise, is in a school seat kept in an inactive and unnatural condition. The moment the pupil begins his work after vacation, practically his whole organism is required to assume an entirely different attitude and perform different functions from what it did during the summer months.

Whenever an individual, young or old, makes a fundamental change in his mode of life, a considerable period is always required for readjustment. During this period of transition he is ill at ease, uncomfortable, and he may even suffer actual pain through the inability of organs to forget their former functions, and to adapt themselves to the requirements of the new mode of living. This is especially true of the growing boy. If you will observe him in school about the first of October,

after he has been shut in for two or three weeks, and especially if he is not given much time for games and play in the open air, you will find him restless, discontented, giving his attention to his work with great difficulty, and ready upon the slightest pretext to abandon his studies for interests that appeal to his muscles. If the weather requires that the windows be closed, so that pupils get but little fresh air, you will find that the active boy will begin to complain of his head being "stuffed up," and then he will be in a very unfavorable condition for effective work. Sometimes one can see the majority of pupils in a class-room with their respiratory passages partially or wholly blocked, and this will prevent easy breathing during the night, as well as during the day. This is the unhappiest season of all for a pupil.

Bring pupils by degrees to the work of the school in the autumn

The practical suggestion to be made here is that we ought to bring pupils by degrees to the work of the school in the autumn. It is a serious mistake to start off at full blast the second week in September, requiring pupils from the very beginning to spend five hours or more each day in a seat. Even an adult could not without considerable disturbance to himself physically, make such a transition as this in his mode of living.

It is surely impossible for a child to do it without a great deal of inconvenience, and even without serious interference with vital functions. It is well known that school diseases thrive particularly during the period of readjustment. But if we could lead children gradually into school life in the autumn, we could probably bring about the transition without doing violence to the bodily functions. It ought to be possible to construct a school program so that pupils could be in school for half a day, say, the first six weeks of the year; and then later an afternoon session of one or two hours could be added, if this should be found necessary in order to accomplish the necessary amount of work. One will run no risk in saying that at the end of the year the pupil will be just as far along if he spends only a half-day in school the first six weeks, as if he spends twice this amount; and he will be in a sounder physical condition.

The problem of vacation

This will perhaps be the best time and place in which to enter a protest against our present method of running our schools for nine months, and turning children loose for three months at a stretch. Our present system is ill-suited to contemporary conditions. It was originated at a time when we were a rural people, and when children were required to labor for profit

during the summer months. We have continued this system, with slight modifications, on to the present time, when seventy-odd per cent. of all school children are in urban communities where they have no opportunity to perform useful work; where, indeed, there is nothing for them to do when the schools are not in session. Some of the larger cities are beginning to appreciate the problem, and are establishing vacation schools; but nine-tenths of the communities in our country which should have school work during the summer have nothing of the kind.

The writer has asked many people in different communities why there should be such a long break in school life; and while some have thrown up their hands and declared the thing was beyond them, the majority have said that children need this free period for rest and recreation. But experience and modern research alike indorse the proposition that frequent short breaks during the year are of greater advantage for health and for intellectual advancement than one long vacation. A shorter school-day, but with a greater number of school-days in the year, would conform to the laws of psychology and hygiene better than our present plan of a long school-day, with three months' total abandonment of school work. The writer thinks it would be

better to have school six days in the week, not more than three, or at the outside three and one-half hours a day, forty-eight weeks in the year, than to have a six-hour school-day with a three months' vacation period. Given a certain number of hours that a pupil should spend in school in a year, then they ought to be distributed evenly throughout the year, rather than to be massed into eight and one-half months.

The problem of control of the young in a community would be vastly easier if they had some work in the school for most of the days of the year. It would be of advantage to have one or two weeks' rest four times during the year, but the vacation ought not to be longer than this. Of course, adults who like long vacations so that they may change their place of abode and apply themselves to new activities will interpret the child's need from their own experience, and they will say, "Why, of course, the child must have three months so that he may cultivate new interests." But the interests of practically all the children in any community are such that they can be best indulged by having several free hours every day in the year, rather than by being crowded for nine months, and then having three months wholly free. The majority of children in the city do not know how properly to employ

their time for a long idle period. They grow weary of the activities which are repeated over and over again in urban communities. They would be much happier if they were in school two or three hours during the summer months, engaged in concrete work such as the vacation schools undertake.

Physical defects and irritants as causes of dullness and disorder

We ought not to bring this chapter to a close without referring, at least, to the effect upon conduct and intellectual work of abnormal physical conditions. Whatever else has resulted from the modern study of children, there has at least been an awakening on the part of parents and teachers to the fact that mental defects and deficiencies often go back to remediable physical causes. Within the last decade, so many cases of intellectual and emotional perversion in the young have been shown to be due to imperfect vision and hearing, that some people are coming to think that all stupidity and viciousness are caused by malfunction of eyes and ears; and it is not necessary now probably to urge upon teachers the importance of examinations to detect defects in sight and hearing.

Hitherto few persons would have said that there was any relation between mental activity and the condition of the teeth, but we are likely to see a change of opinion in this respect. Recently some results

were gained from an examination of the school children of Andover, Massachusetts, which indicated that defective teeth had a very serious effect upon the mental processes of children; and these results are being corroborated by extensive examinations in foreign countries. In a recent issue of the *Pedagogical Seminary,* Superintendent Johnson, of Andover, presents us with this picture of the average school child of his city: "He has twenty-four teeth; eight of them are diseased; sixteen of them are discolored with unsightly accumulations of food deposits, or else he has some noticeable malformation, interfering with breathing or mastication or disfiguring his appearance; three of the four first permanent molars are seriously affected, or else one is already lost and decayed. He has either never put a tooth-brush to his teeth, and has had toothache more or less during the past year, or he is suffering excruciating pains, and has never been inside of a dentist's office. Furthermore, the chances, as will be shown later, are that he has suffered with malnutrition, that he is shorter and lighter than he should be, and that his school work has been impaired. And, what is sadder, his condition is growing continually worse."

But, serious as defective teeth may be in their influence upon the child's work, it is nevertheless

probable that attention needs to be directed now especially to the baneful influence of imperfect respiration upon the conduct and intellectual activity of children. In a general way, people doubtless appreciate the intimate relations existing between good breathing, and health of body and mind; but, after all, the majority of us who have to do with the young seem quite indifferent to this matter, mainly because conditions which interfere with proper respiration are not readily detected by the untrained eye. Occasionally a parent who sees that his child breathes through his mouth much of the time suspects that there must be some interference with respiration; but if he keeps his mouth closed, the parent passes him up as all right, and the teacher does the same, even though he may be dull and disorderly in the school, and without apparent cause. However, there are cases of defective respiration that are not manifested by mouth breathing, but they may act as a blight upon the child's life. Probably the most serious consequences of defective respiration occur during sleep, when the nervous system is partly relaxed, and ought to be completely so. It is well known that enlarged tonsils and adenoid tissue sometimes fill up the respiratory passages during sleep, but may be kept fairly well out of way during the day by reflex nervous control.

The writer has followed very carefully two children who were for a time the victims of defective respiration. Both had much trouble with breathing during sleep, and were usually quite restless, so that they rarely secured perfect rest at night. As a consequence, they were both in a fatigued and irritable condition most of the time. With one child the disastrous effect of this condition was manifested in general lethargy, a growing indifference to everything around, and a lessening of keenness and endurance in all intellectual operations. With the other child the over-tense condition of the nervous system resulted in lack of self-control. He was unmanageable much of the time, flew into a passion on the slightest provocation, and was often in tears over slight annoyances. Nobody seemed to know what was the trouble with him. Parents and teachers alike tried to arouse the first child, through dermal stimulations as well as exhortation, but to no avail. The second child became a great problem because of his hostility a good part of the time to everybody and everything, and his peevish, petulant disposition. In both cases much attention was given to food and healthful habits of life, but no one thought to notice their breathing at night. Some comment was made upon their restlessness in their sleep, and this was thought to be due to their

nervousness, and not to their inability to breathe easily.

Upon examination finally, serious barriers to good respiration were discovered. An operation was performed upon both the children, enlarged tonsils being removed in one case, and adenoid tissue in the other. Immediately there was improvement. The lethargic, indifferent child came slowly but surely back to her original attitude of sprightliness and vivacity. Every day one could see her gaining in alertness, and now she is as responsive to the world as one could wish, and making excellent progress in all her school work. The second child has acquired much self-control, though his difficulty has not been relieved so completely as could be desired. But there can be no question whatever that the cause of the shortcoming in both children was improper oxygenation of the blood, and restlessness during sleep. Of course, the organism suffers severely when it is difficult to obtain a sufficient supply of oxygen, but this is after all not so important as the nervous effect of inability to breathe.

The importance of this matter demands that investigations should be made in all public schools to determine if there are any obstructions in the respiratory passages of pupils. It needs no argument to show that if left to the initiative of parents, not

one case of defect in a hundred will be discovered. The experience of people in the examination of eyes and ears has shown this. But unhappily many parents are apt to think that this interferes with their rights, or they are afraid that their children will be injured in some way. People are always hostile to any innovations of this character. There is hardly a city in the country where children's eyes and ears have been examined that teachers and specialists have not had to fight for the privilege. The attitude of the typical parent was illustrated last fall in a city which represents itself as progressive, when it was proposed to have examinations made by specialists of the condition of the teeth and throats of school children. So many parents sent in protests that the board of education refused to have the work done, though it was to cost them nothing. But there has never been an instance, so far as the writer is aware, of examinations having been made by properly trained persons, when parents have not been delighted with the results; and this fact should warrant those who know the necessity of it in urging its prosecution, even in the face of a good deal of opposition.

CHAPTER II

PROBLEMS OF DISCIPLINE

WHAT is a "spoiled" child? The term is a relative one; it can not be well defined abstractly, other than to say that one who is constantly at odds with the people about him, or hostile to the rules of conduct of the society in which he lives is "spoiled." It is, though, a matter of degree; every immature creature is to a greater or less extent ill-adjusted to its environment. Maturity really means perfected adaptation. But here is a boy who would be recognized almost at once as a "spoiled" child. He is eight years of age, and there is no instance on record when he readily and cheerfully acquiesced in any suggestion affecting his action, and made by the members of his family, unless it happened to be exactly in the line of his desires. He is a bully through and through. He issues commands to those older as well as those younger than himself; and he is an adept in the use of a variety of arts, with which nature endows every child in greater or less degree, to get his mandates carried

The "spoiled" child

into effect. The people nearest to him feel they ought not to "give in" to him, but they can not resist him effectually now. His expressions of anger when he is crossed are so violent and prolonged that they "get on the nerves" of all who hear or see him, so that they can rarely hold out to the end against him. Of course, this shows his natural shrewdness and perseverance,—estimable qualities if in their expression they could be brought into accord with the existing social order. As for willingly obeying any one, no such activities ever issue from his springs of conduct. His view of life, naïve, of course, is that people should serve him; that *his* desires should always be first considered. Nature endowed him with this disposition, and his trainers have brought nature to perfection.

The "spoiled" child is hardly ever a happy one

And what is the consequence? For one thing, he is very far from a happy child. He is in conflict with some one much of the time, because most people will not yield to him without a struggle. He brings upon himself a good deal of physical discomfort, because he will eat whatever he sees and wants, no matter what advice his elders may give him on the subject. He is undersized, partly, no doubt, because of his tempestuous, emotional life, and his bad hygienic habits. He gets on very poorly

in school, because he is not docile or teachable. He lacks the attitude of a learner. He is a boss, a bully; and bullies can not take lessons readily. They can not assimilate the experiences of others, as the school presents them; and so this unhappy boy is dull and behind his proper class. At the same time, the people who have to live with him are more or less miserable whenever he is in sight, since there is likely to be a clash at any moment. It is a thoroughly disagreeable situation all the way 'round.

Could it have been avoided? A young horse or dog is less well adapted by nature to live under domesticity than is a child, and yet horses and dogs are usually trained so that they adjust themselves very well to the existing order of things. And they probably get a good measure of happiness out of life, and give pleasure to the people with whom they have relations, because they early learn the lesson of ready adaptation. The problem of training the child is more complicated, but the principles involved are the same. Training always means just one thing,—so influencing an individual in his intellectual processes, his moral tendencies, and his habits that he can adjust himself in happy relations to his environments, social as well as physical.

As we have seen elsewhere, nature equips the individual in considerable part—in largest part, no

Higher and lower tendencies in human life

doubt—for a simpler, more primitive, more egoistic, more impulsive life than he can live in contemporary society. But she also equips him with the possibilities of adaptation to complex social conditions; and training consists in strengthening the higher tendencies and weakening the lower ones. Fortunately the child is endowed with traits that we can utilize to accomplish our end. He is a "born imitator", and he is also very quick to discern what experiences will result advantageously and what ones disastrously for him. Animals are gifted with the latter trait, but not with the former to any extent; so that their training must be based wholly upon their desire to avoid pain and to increase pleasure. Make it clear to any of the higher animals that a given act—as when a dog barks at passing strangers—will bring disagreeable results always and inevitably, and he will sooner or later abandon the act, often even if it be deeply instinctive. And the animal will be none the less pleased with life on account of the sacrifice. There are, it is true, a few impulses so profound and urgent that they will be expressed even at the risk of forfeiting life in their gratification. But probably nine-tenths of all a dog's activities can be definitely and permanently determined by the simple method indicated,

the essential principle of which is that the creature must be made to realize that certain results inevitably flow from specific activities.

But a dog or a horse can be easily "spoiled" in the hands of unwise trainers. Take, for example again, the case of the dog that barks at strangers. The writer has studied the change which took place in the habits of a young dog which had been well trained; but before its actions were securely fixed, it was transferred to a new home where there were several children. Two dogs in the neighborhood had developed the barking trait, and when the new dog came into their company, he soon showed an inclination to yield to his original impulse. The adults in his new home were for punishing him so as to strengthen his inhibitions, in order that he might keep to his good habits. But the children could not endure the thought of making him suffer. They pleaded for him, and successfully. They declared over and over again that he would not commit the offense another time, and even if he did they could manage him, so that he would not go the way of the other dogs in the neighborhood. Thus he escaped the discipline which would surely have been given him if he had been under the control of his former trainer.

Under the circumstances his course could have been easily predicted. It was almost as certain as the

law of gravitation. His native tendency to bark gradually reasserted itself. There were differences of opinion among his new trainers regarding his treatment, and he always got the benefit (temporary benefit only, of course) of the doubt. He would be "scolded" by one child and let go free by another, while no one kept up the discipline of his first master. As a consequence, the dog in less than a year was as bad as the worst of his associates. He paid little heed to the constant scoldings he received, and he was an annoyance to every one in the community. As a result, he got on much less happily himself than when he refrained from barking, and received the kindly expressions of the persons about him. He became a "spoiled" dog because he acquired habits which set him in opposition to his environment. The children were incompetent trainers, because they allowed their sentiments to dominate their judgment; and in deciding what should be done at any given moment, they lost sight altogether of the future. Rather than inflict a little pain now they took the chance of subjecting the dog to continual unhappiness later on. The dog was entitled to wiser treatment than this. He could not see what was ahead; he had to depend upon the foresight, the moral courage, and the sanity of those who should have had the whole span of his

life in view, and shaped the action of the moment in view of the greatest good in the days to come.

Short-sightedness in the training of children

How often one sees children governed in some such way as this dog was by his last masters; and with similar results. Foreign observers say we Americans fail most of all in the training of the young. While our children are yet babies, it is claimed, they rule their elders. They are not amenable to authority; they are "too previous" on all occasions; and they themselves and those about them are the worse off on this account. So many people in their training are like the children with the dog—short-sighted and sentimental. Of course, the child's life is altogether too complex for one to trace the evil results of particular modes of government, as can be easily done in the case of the dog. But if in an unprejudiced way one will for a number of years observe the children he knows, he will see that a certain type of training invariably produces unhappy results; it "spoils" children. The writer has in mind a mother, whose five-year-old child is saucy, impudent, irritable, domineering, making himself and others very uncomfortable most of the time. These qualities are, so to say, natural to all children, if only they be given the right sort of soil in which to grow. They are all expressions of

the native domineering tendency. The mother of this unfortunate boy (he is unfortunate, not blamable, for what better does he know?) began in the wrong manner in her training. She treated her babe as a plaything, to be stimulated in every kind of way, because his responses were so "cunning". The babe was frequently shown to the neighbors, who always handled him, and put him through his little tricks. No matter what the child did, the grown-ups who saw him or heard him would gurgle over him and make the performance the center of attention, which is what every human being normally desires, from the cradle to the grave. When the infant attempted hectoring tactics upon the mother or any one else, the onlookers would all exclaim, "How cute!" "Isn't he too dear for anything?" and so on *ad nauseam.*

Things went on in this way, the child being insolent continually, while the mother ignored the conduct, because it made little difference for the moment. The neighbors, with good intentions, laughed at the child's performances, and really incited the little rebel to further aggressive ventures. Of course, a child of one year can not do much harm anyway, so let it bully all it wants to. Even at two years of age, it is too feeble to disturb the established order of the home or the neighborhood by its protests and

its commands; so what is the use of making it unhappy by restraining it? And what is the harm of stimulating it, and enjoying its childish display of anti-social traits?

Yes; but how is it at a later period? At the age of four the bully, who has been perfectly consistent in his development, may be at odds practically all of the time with his mother and brothers and sisters and playmates. They may scold him incessantly, but this is apt only to anger him, and to intensify his hostility to most of the rules and regulations of the phases of organized society with which he comes in contact. His bullying is not so "cute" at four, and the very people who helped to "spoil" him are likely now to go around advising what ought to be done with him. Meanwhile, no one does anything to turn the tide of events effectually, and the child runs on along the route that will bring him to a most undesirable end in social antagonisms.

How animals are "broken"

In "breaking" animals, there is always a contest of will; but once a trainer succeeds in having an animal do what he wishes of it, there is not likely to be trouble thereafter. But if he fails, and gives up to the animal, he will conquer it later only at the cost of a relatively vast amount of time and nervous energy on both sides. The reason is apparent. Whatever

the outcome of a first experience of this sort is, it tends to be regarded by the animal (or the child, either, who is non-reflective in respect to such matters) as a guide for future action under similar circumstances. So a five-year-old child who has, from the cradle on, bullied people will hardly ever get over feeling that he can continue to order them about whenever it is to his interest so to do. His whole organism—body, intellect, and emotions—gets toned through and through with the domineering temper. If you reform him you must begin and build up a new individual practically *de novo*. This it is that makes it imperative to train the child rationally from the very start.

Children must be let alone more than they now are

And the first thing to do is to *let him alone* as much as possible. And especially must the neighbors and all strangers be kept almost wholly away from him until the parent gets certain fundamental habits of response securely fixed in him. It is certainly not excessive to say that in America we are likely to be too free—too nervously, hysterically free—with our children. Then there seems to be developing among us a weak sentimentality, which leads many people to indulge a child in his every whim; and the more we indulge him the more discontented he is apt to become. The

really happy children in American life to-day, so far as the writer knows them, are not the children who have never felt restraint, but those who from the beginning have been indulged in only those actions which they will be at liberty to practise under all circumstances. The really miserable child is the one who will acknowledge no authority, and who is incessantly trying to carry through his own designs. The more he coerces people the more he seems to lose emotional poise. In the light of contemporary science, and also of the experience of progressive peoples, it may be said that an immature creature requires the restraining hand of wise authority. But this restraint would not be much required in youth if we would be earnest and fair with the child from the beginning in all vital matters of conduct. If we were perfectly uniform in our moral attitudes, and firm in carrying out our commands, the child would early choose his course so as to keep in clear water; and he would be happy in this choice. But we must *start right,* so that the individual in his very first lessons will learn what he may do without hesitation, and what he must check himself in. It will not be necessary, with rational training, to be severe often; though it would be vastly better for every one concerned if a child should be punished soundly once or twice for

an undesirable tendency, than if he should be let go to-day and to-morrow and the next day, until in the end he must be nagged every day about it.

Let us see how our principle would work out in some typical cases. Is it of advantage to a pupil to be favored so that his tasks are made a little lighter than those of his fellows, and his errors are excused more readily? Several mothers were recently discussing the principle in question in the presence of the writer. It appeared that a boy in the sixth grade in the community in which these women lived was regarded by his classmates as the object of special favor by the teacher. He was the son of the superintendent of schools. It was charged by these mothers that the teacher did not bear down upon him so hard as she did upon their own children. If he did not recite well in his classes, she would pass over his shortcomings lightly, but she would make up for her leniency when she criticized other pupils. These mothers said the teacher marked this particular boy higher than she did other pupils for the same quality of work; also, she was in the habit of overlooking mischievous conduct in the superintendent's son, which would be sharply dealt with in other pupils. In short, this boy, presumably on account of his paternal connection, was a *favorite pupil*. His fail-

The favorite pupil

ings were minimized and his virtues magnified as compared with his companions.

These mothers appeared to regret that the fathers of their own children were not members of the board of education, or did not occupy some other distinguished position which would incline teachers to show favor to their offspring. They seemed to think the boy who was favored had a great advantage over other children, though in reality he was no better than any of them, if indeed he was as good as his associates. Foolish women! They can not look beyond the experience of the moment to what lies in the future. If they could, they would return thanks that their children were not favored for artificial reasons, and that they were going through the schools without anything commending them to the favor of teachers but genuine merit.

Of all calamities that can overtake a child, there are few that can work such disaster as to be favored for mere superficial reasons. The boy whose errors are overlooked in school because of his social connections will regret the experience to the end of his life. The capable pupil who is not held for conformity to the standards of the school-room in every essential respect is to be pitied, and not to be congratulated. A teacher who will favor the son or daughter of a superintendent, or president of the

board of education, or mayor of the city, or governor of the state, is, although unwittingly, the child's worst enemy. Momentarily, the child may find some pleasure in being exempted from the rules enforced upon his fellows, but such pleasure is of short duration. He can not go far without finding that the failure to realize standards in the earlier part of his work and in his conduct will be the cause of his undoing.

It is a significant fact that the children of persons one knows in positions of distinction and authority often come far short of their parents, and their associates, too, in their achievements. Frequently, at any rate, these children have native abilities which were not developed in the school, or outside either, for the reason that on account of the distinction of their parents they have been treated more leniently than other children. They have been permitted to move along the lines of least resistance constantly, with the inevitable result that they are unable now to accomplish anything which demands application, effort, or concentration of one's powers.

In some schools the son of a workman may not be excused for his errors, but the son of the governor may be; and when this goes on for some years, it happens that the latter child comes to feel that his errors will always be overlooked, and it is not

necessary for him to take such care as others are obliged to take. But when this individual comes to fill his own place in the world, people will not overlook his errors. They will hold him responsible for all he does. While timid and hero-worshipping teachers may let the son of the governor slide through the school, his associates in maturity will not let him slide through the world.

For this reason, it would be well if the school could be more strict, if anything, with the children of the superintendent of schools and the members of the board of education than with other pupils. The only way to favor a child is to *train him right,* not to overlook his shortcomings, nor to fail to hold him to the performance of tasks within the range of his abilities. We are all inclined to be too sentimental about this business, but the more the writer sees of education and life, the more convinced he becomes that there is no place for mere sentiment in the school-room. There is a place for enthusiasm and good cheer and heartiness and all the qualities which make pupils happy and contented; but there is no justification for that sentiment that sacrifices competency in the future for more or less doubtful pleasures of the moment. Don't favor a pupil for anything in the world but achievement and good conduct. You will need, though, to resist the ten-

dency to favor him because he lives on a fashionable street in the city, or in a palatial residence, or because his mother invites you to her receptions, and so on *ad libitum*.

New times bring new problems in training

There are profound changes taking place in our social life which make the sensible, wholesome rearing of children extremely difficult. Such changes have occurred in other civilizations, some of which have not been able to solve the problems involved, and those peoples have fallen into decay. Just in the measure that community life becomes highly complex and luxury increases, in like measure does the danger that children will be "spoiled" increase. It has always been true that when people have lived a relatively simple life, every one having work of some kind to do, the children early learn to adjust themselves willingly and happily to the established regimen about them. When work is required to be done in order that people may obtain what they desire, it is easy for even a child to feel that it *must* be done, and that he must adapt himself to those who are responsible for the doing of it. But with the growth of urban life, children are not apt to feel the necessity of regular duties being performed and adults being obeyed, as they easily do in a simpler life. Under present-day urban conditions, chil-

dren are trained by servants far more largely than they were when social life was less complex; and servants are to be ordered about, not obeyed. So, too, the mother in the modern city is often keyed up to such a pitch of excitement on account of social tension that she has neither the leisure, the energy, nor the inclination to work out moral situations with her children, and to follow them through until she establishes a feeling and a habit of adjustment to the customs and institutions of the community. She is usually nervous and in a hurry, and she, like the children with the dog, settles problems on the basis of immediate and not future need. Let any fair-minded person observe how frequently children in an American city home are bribed to adapt themselves for the moment to a necessary rule of conduct, and he will be impressed with the way social strain is pressing in upon the child and "spoiling" him. It is remarkable to what an extent this bribing business is carried on in some homes. But there comes a time when bribing will not do, and then the vicious character of this method of training stands revealed. It will help out of a present difficulty, but it corrupts the whole moral character of the child, and unfits him for life in modern society.

The most serious change taking place in our social life, as it affects the training of children, is the rapid

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The elimination of masculinity in the training of children

elimination of men from the whole business. A really impressive fact was brought out while a group of gentlemen were discussing this matter in Chicago recently. Every member of the group but one confessed that the only times he saw his children during the week were Saturday afternoons and Sunday mornings, and often engagements would prevent his seeing much of them at these times even. In the country, as in the city, pupils often pass entirely through the schools to-day without coming under the influence of a man at any point in their progress. Giving full credit to the happy results flowing from feminine influence in child-training, it still can be said without qualification that nine out of ten boys will be more or less "spoiled" if they do not come under masculine control during a considerable part of their life in the school and outside. A woman can not effectively teach a boy certain lessons he ought to learn thoroughly in order that he may adjust himself to modern conditions. She may talk to him about his conduct, but she can not dynamize her talk so that it will take deep hold on impulse, and check it or divert it as circumstances may require.

In the countries across the sea where practically all the teaching is done by men, there seems to an

American observer often to be undue roughness in the schools. In some of these places one misses the sympathy with the young child, and the patience in helping him through his difficulties, which is usually found in typical American schools. The invasion of our schools by women has to a large extent eliminated the rough-and-ready methods which are in force now in some countries of the Old World, and which were in fashion in our country fifty years ago. It is a commonplace remark that man is cruder and more biceptual, as it were, in his attitude toward the young than is woman. The former relies more largely on compulsion to attain his ends; the latter on persuasion. In the school-room, a woman can as a rule adapt herself to the spontaneous expressions of children more readily than the man can. It is fundamental in the masculine nature to coerce non-conformists into compliance with rules and regulations which have been instituted for their government; but feminine nature can easily tolerate a larger degree of independence, especially in the young.

Hypertrophy of our sensibilities

While the development of tenderness in our schools is greatly to be commended, is there yet danger that it may go too far? Is it imperative that there should be a certain amount of sternness, even roughness, in the man-

agement of pupils, boys especially? The typical boy respects muscle more than he does kindness, gentleness, or any of the feminine virtues. An unprejudiced observer of our educational régime can not fail to see boys in our schools who are going to the bad mainly because they do not come under the hand of a strong man anywhere in their school course. Nothing but masculine vigor, not too much repressed, will properly impress such boys, and turn them from their evil ways. And not only do boys require such influence for their sound development, but there seems to be need for it also in the girl's life, though the popular view is that while the boy should have the softening effect of woman's influence, the girl will come out all right even if she is taught from start to finish by one of her own sex.

In modern times people have become very responsive to the expressions of childhood. Many of us can not endure rigorous methods of dealing with children, because the circumstances of our lives have made us supersensitive to this sort of thing. Our forebears, who had rougher work than ourselves to do, were more dynamic in their attitude toward the young. Their sensibilities were not particularly keen in response to the apparent distress of a child who did not adapt himself to necessary rules of conduct in the home, the school, and the church. It

is possible their sensibilities were not delicate enough; but it is more likely that our sensibilities are becoming too active, so that we supinely give way to children when they need for their own welfare efficient resistance, restraint, and control. This is certainly true in respect to a large proportion of the boys in our schools, and any pseudo-philosophy which over-emphasizes delicacy in dealing with them will prove a detriment not only to the boys themselves but to society at large. At any rate, there is slight danger that one positive-minded masculine individual in a school will nullify to a harmful degree feminine tenderness therein.

Corporal punishment

The over-refinement of our sensibilities in dealing with the young is seen in the tendency to prohibit corporal punishment. Any and every form of physical correction for wrong-doing is prohibited by law in some of the cities of our country. France has recently enacted a law to the effect that no pupil in any of the public schools can be subjected to corporal punishment, while in Germany corporal punishment is quite in fashion. A comparison of the schools of these two countries shows greater spontaneity among the children in the former than in the latter, but at the same time the French pupils have less respect for the rules and regulations of the school than is the case with the

German children. The latter are more docile, and they accomplish more work than the former. One can hardly doubt that it would be of advantage in a French school if there were a little more rigor in discipline. The children would not be the less happy therefor, and in the end more and better work would be accomplished.

Soft methods in training

It is not the intention to make a plea for corporal punishment as it was practised in our own schools twenty-five years ago; but it seems a decided mistake to prohibit it by law, so that it can not be used under any circumstances. Very sensitive people object to the use of the rod, because they feel it is brutalizing; but this is projecting adult sensibility into young children, to the great disadvantage of the latter in their sound training. Of course, children are growing more sensitive to control, and they respond even more readily to gentle influences; but it is absurd to say that they have as yet evolved past the necessity of control through physical pain. In the hands of a very rough teacher, physical punishment is likely to do harm in a school; but the fact is such teachers can not now be found in the schools in large numbers, as they were in days gone by,—within the memory of some of those who will read these pages.

The fear of physical pain is the only real correc-

tive which some children can appreciate. If they develop normally they pass out of this stage, but it is perfectly normal, and probably morally wholesome, at a certain period in their development. Mention has been made of the rod; but there are other means of administering physical stimuli of a corrective sort which are far more effective than this. The rod and the ruler are apt to irritate rather than to reform. What a refractory boy needs is to be made to realize that there is a vast power back of the law and the order which the teacher represents, and which he is asked to respect. This power must be impressed upon him through suggestion largely, and it can be much more forcibly expressed in other ways than in striking.

Suppose a malicious boy who is hostile to the spirit of the school is invited to a conference with the teacher, and the latter simply takes him in his arms, and gives him an inkling of tremendous strength, and makes him feel that if this strength were fully expressed upon him it would be the destruction of him. The boy has not been injured in this experience, but he has been made conscious of great force, which might be at any time directed upon him if he should persist in non-conformity to the rules and regulations of the school. Punishment, to be effective, must be a matter of anticipa-

tion. One can stand the actual pain when it comes, but the thing that works reform upon an offender is looking forward to a sort of inevitable thing which is very likely to do considerable harm. No one is ever a good disciplinarian who is constantly exercising his power to the full. Really effective discipline is rarely expressed; it is rather *felt* by every one under its control.

No cure-all in discipline

While objection has been urged to the prohibition of physical chastisement by law, so that it may be employed in extreme cases, still when it alone is relied upon to cure evil tendencies it must inevitably prove a disappointment. Parents and teachers might get a useful suggestion from the fact that as medicine becomes more scientific, physicians become less dogmatic in their theories concerning disease, and more cautious and reserved in their dealings with the human body. The ready-made doctor always knows what to do, and he never lets pass an opportunity to employ his drugs or his knife. Whenever he sees disordered function he attacks it directly, not considering that it may be only the outcome of very complicated and subtle disturbances lying far out of sight. The charlatan's procedure seems always to the uninitiated to be straightforward, direct, simple. If you show him a coated tongue, he "knows" you have

"indigestion", or a "bad liver"; and so you must take a spoonful of his "specific" several times a day. But the competent physician understands that, to a greater or less extent, the whole organism is involved in any particular malady. It has for some reason lost its resistant powers, and a cure can be achieved only when these are restored, which means that the entire program of every-day life must be taken into account.

The efficient doctor always seeks for the conditions that have prevented nature from exercising her recuperative influence, or that have turned her aside from her usual course; and then he attempts to modify these conditions. This leads him to place greater faith in hygiene, in the broadest sense, than in drugs, though this greatly complicates his task, and makes it less spectacular and dramatic in the eyes of the patient and his friends than the pyrotechnical display of the charlatan. When a man is ailing he likes to feel that something very specific and dynamic is being done for him. This is one reason why the row of tumblers and the boxes of pills have had such popularity by the bedside of the sick. When one is in the clutches of disease, he will often swallow stuff which nothing could induce him to take when he is in better condition to endure it. He hopes thus by heroic measures speedily to unmake

what has been years perhaps in the making. He reasons in his naïve way that it is with the human body as with a machine—a great effect can be produced instantly if one can only apply energy enough.

The charlatan in ethical training

The keeping of the spirit in health and restoring it thereto when it becomes diseased bears some analogy to the treatment of the body. The charlatan in conduct is ever ready with his sovereign remedy for all the errancies of childhood and youth. His prescriptions are of such obvious appropriateness, too, in the eyes of many teachers and parents, that his counsel is eagerly sought and followed. In general, his system of moral and educational philosophy reduces itself to this: when a child does wrong, his will is vicious or lethargic, and it should be purified and stimulated by pains and penalties of some sort. "I gave him a good, sound whipping," said a mother to the writer recently, when she detected her boy of seven in the act of appropriating some money that did not belong to him. She did not give a moment's thought to modifying the environmental influences which nurtured this deed in her son. She simply applied her "specific" to the manifestation of the disease, and the complex, predisposing conditions were left exactly as they were originally.

All modern study of child-nature is showing us

ever more emphatically that behavior is in any particular case the outcome of an exceedingly intricate complex of impulses and motives; and the more one investigates the springs of conduct in childhood, the less confidence he feels in his ability to give off-hand instructions regarding the course to be followed in any special instance of wrong-doing. He feels the intelligent physician's dread of tampering with an organism which is but ill-understood, and he suspects that the thing is ordinarily too complicated to be dealt with in the simple and heroic way which alone will satisfy "common-sense" people. Whipping or scolding affords a cheap and convenient method of procedure for all transgressions of the moral law, and it eases the feelings of those guardians of youth who think reform in one's nature comes about *per saltum,* as a consequence of violent experiences. But unprejudiced students of such methods of punishment as a means of correcting juvenile offenses are agreed that in the majority of cases they are a failure. At best, as employed in youth, their influence is usually temporary, and they touch only the externalities of conduct, not the springs thereof. The state has discovered that the prison and the whipping-post do not reform young criminals; nothing can accomplish this but a long period of training that begins at the very bottom,

and literally builds up a new moral structure. The method is slow, and it lacks in spectacular features; but human nature can not be transformed at the drop of the hat.

Students of child-development are coming to lay chief emphasis upon *prophylactic* rather than upon *therapeutic* measures in the training of the young. They realize that by the eighth or ninth year a child has acquired his bent in respect to much if not most of his conduct. Indeed, he probably has the foundation of the whole ethical structure laid as early as the third year; for by this time he has discovered whether he is to obey the laws of society as expressed through his parents, or whether he will follow laws of his own making. The time to establish in the child respect for authority, and a disposition to yield to it readily and contentedly, is just when his expectations and habits are getting set, for then the task presents comparatively few difficulties. But an extremely wasteful and ineffective method of training consists in giving way to the boy until he gets out into the world, where his actions have public significance, and then beginning to whip him for deeds which heretofore have been permitted.

Our discussion of discipline thus far has proceeded almost wholly from the standpoint of the adult, who is responsible for leading the pupil to

From the pupil's standpoint

adapt himself to the social order in which he finds himself. But let us look at some of these questions for a little while from the point of view of the child who is being coerced into conformity to the rules and regulations made by grown people. Here is a typical concrete instance. A principal of a grammar school was recently heard scolding the pupils in the third and fourth grades. Upon inquiry it was learned that during the recess they had played in the street. There had been a heavy shower during the morning, so that some mud had formed in the street at the time of the intermission. Of course, the pupils found all the mud there was, and transported a good part of it into the school-room. The teachers and principal were angry, and they showed it in voice and manner. As a penalty, the pupils were deprived of their forenoon recess for one week. Needless to say, this command was vigorously resisted by the pupils, but to no avail. Its enforcement, however, led to a good deal of conflict throughout the duration of the penalty, and it resulted in making both teachers and pupils unhappy.

The pupils said in explanation of their conduct that they had no other place in which to play; that they did not "mean to litter up the school-room"; that they were sorry for what they had done, and so

on. The teachers, on the other hand, said there was no real reason why they should play anyway. They had time enough to play after school. While they were at school they ought to "behave themselves". Now, right at this point comes the tragedy. The teachers do not want to play. They would rather keep quiet, and either rest or visit with one another. They can not understand why the children should not be willing to do the same. These particular teachers feel that the chief reason the pupils do not keep quiet is because they are heedless and mischievous. If they were well-disposed, they could control themselves, and keep from getting in the mud.

Probably the majority of grown people do not appreciate the absolute necessity of a child expressing himself in a manner quite different from that of the adult. Adults are usually pleased to visit with one another, because they have interests that can be shared by mere talking. But nature has not prepared a third- or fourth-grade child so that he can enjoy his social relations in the way in which an adult does. Nature says to him: *"Play;* don't simply *talk* to your comrades, but *run* with them, *compete* with them in fleetness of foot, and in other ways." In a certain sense, a child has little power to control himself when nature is insistent. He must follow the lead of his impulses to a great extent.

Temporarily, of course, he may restrain an impulse; but it is extremely difficult to get a school of five hundred pupils to restrain their play tendencies during an intermission of fifteen minutes.

Positive methods in discipline

What should have been done in this situation? Should the pupils have been punished for lack of thoughtfulness? Should the teacher have anticipated what was likely to happen, and have suggested activities which would have prevented this catastrophe? It certainly seems that the blame must be laid upon the shoulders of the teachers. Perhaps it was justifiable to inflict this penalty in order to develop in the child a sense of responsibility; but how much better it would have been all 'round if the occasion for it had been avoided. It can be said unqualifiedly that the control of a large body of pupils can never be successful by the employment of negative methods principally. If there is no opportunity for the use of positive means in providing for legitimate activities, then it would seem to be wiser to ignore some sorts of conduct, which under other conditions would not be tolerated. At any rate, to enforce discipline from the point of view of the adult alone is a serious mistake. The supreme concern of the teacher must be to get the child's point of view, and to work out his discipline accordingly, though not of necessity

conforming fully to the child's view on any occasion. But whatever methods of discipline are employed, it is safe to say the least successful will be mere negation of the natural tendencies of the young, and of boys especially.

CHAPTER III

FAIR PLAY IN THE SCHOOL-ROOM

A typical case requiring correction

In a prosperous city of the West, there is a public school building situated at the intersection of two busy streets. There is almost no playground space attached to the school for the use of either the boys or the girls. On the opposite side of the street from the building is a narrow border of lawn, which the street commissioner has ordered should be kept free from trespass by the pupils. Early in the year he instructed the principal of the school to warn the children against encroaching thereupon, and so the principal sent word throughout the school that any pupil found on this forbidden spot would forfeit his intermissions. Now, there is in the sixth grade of this school a boy who is fond of games and plays with his fellows, and who likes to be in the thick of things whenever he can get the opportunity. Further, he is so constituted, as might be expected, that he must have a considerable amount of vigorous out-

door exercise constantly in order to avoid more or less serious physical disturbance.

Shortly after the principal issued her manifesto regarding the grass-plot, this boy was caught trespassing by one of the teachers. Other boys were very near the danger line, but he was the only one who had actually offended. He was told by his teacher that he could not leave his room during any of the recesses for a month. He declared that he was not to blame for his apparently disobedient act; the boys had pushed him against his will on to the lawn, which statement was, in all likelihood, true, for the boys with whom he played were pretty rough and fond of adventure. Quite thoughtlessly they wanted to see what would happen if they could get this boy caught on forbidden ground. However, they did not feel moved to acknowledge that they were at fault; and there was really no occasion for them to confess that they were guilty, for the teacher did not ask them, and the spirit of fair play was not highly developed in the school.

After the boy had lost his recesses for two or three days, his parents realized that if this penalty should be long continued it would work ruin to the health of the victim. So they remonstrated with the teacher, but the latter resisted their petition for clemency, saying that the boy had broken a rule of

the school, and he must suffer the penalty for disobedience. After one week, the parents removed him from the school, and he remained out for a while, being idle and wholly discontented during the time. At this writing he has just gone back to his work, and the matter has been adjusted so that he is not deprived of his recesses. But the parents are in mortal terror lest he will fall into trouble again, which will bring on another season of strain and stress and conflict with the teacher.

Experienced reader, you who have been through many school-room trials, what would you have done in a case of this sort? Would it have been better for the principal to have defended her pupils against the demands of the street commissioner, and appealed to the citizens to assist her in resisting an unjust requirement, which made the problem of government in that school a most trying one? If no relief from a serious burden could be had in this way, should the teacher have deferred to the parents' judgment regarding the treatment of the boy in question, substituting another punishment for the deprivation of his recesses? The teacher proceeded according to the doctrine of natural consequences, in which so many people have faith to-day,—if a pupil can not be at large and obey the rules of the school, then he must be confined so that he will not

have an opportunity to break these rules. If the teacher had yielded to the demands of the parents, and let the boy go free, would it have been possible for her to maintain effective control over her school thereafter? Would it have been morally injurious to the boy to be pardoned, and thus to be relieved from the necessity of paying penalties for his misdeeds, when his parents begged mercy for him? Even if the infliction of this penalty should prove a hardship, and be in one sense an injustice, would the boy not take particular pains in the future to avoid getting into trouble again?

Securing the co-operation of pupils in cases of discipline

Suppose we attack this problem from another point of view. The boy maintained he was really not at fault; he was the victim of the mischievous action of his playmates. Suppose the teacher or the principal had brought the matter before the school as a whole, taking as much time as might have been necessary in order to discuss it fully and frankly. First, the entire school could have been led to appreciate that the teacher in making her rules had simply obeyed instructions from the authorities of the city. Certainly pupils from the fourth grade on can be guided to see that when authorities make commands, even if they seem to be unjust, they must nevertheless be obeyed, unless those who made them

can be convinced that they are not fair, and so should be withdrawn. If it seemed clear that the order issued by the street superintendent was unfair, and that it ought to be rescinded, could not the principal have led the school to view the thing in a reasonably calm way, taking due account of the commissioner's side of the case as well as their own? Could she not then have helped her pupils to see that a good plan might be to draw up a petition to be sent to the authorities, urging a reconsideration of the order? Meanwhile the pupils should obey the command, awaiting the outcome of their petition; this would seem reasonable to every one. If any individual pupil failed to comply, then in fair play he should be made to suffer for lack of conformity to the rule, which was agreed to by the school as a whole, because it was reasonable and necessary. If any group of pupils should be the cause of getting one of their number into trouble, then in fair play again, that group should bear the penalty of the misdeed, rather than the particular individual who was made the instrument of their disobedience.

But some teachers will ask, "How can the guilty group be detected, and their misdeed located upon them?" In any school where there is a reasonably wholesome sentiment, boys will insist upon fair play in such situations as the one in question. This

is a factor in discipline that can be counted on always. The instinct of the young from the eighth or ninth year forward is for square dealing, in a sort of crude way it is true; but nevertheless, they will demand fair play in the simple life on the playground. Even groups of boys who have transgressed the conventions and laws of the community in which they live, and have been sent to reform schools and other institutions—even such groups retain the elemental sense of fair play among themselves.

Pupils should not be challenged to a contest of wits in discipline

One can find in the city and rural schools in every part of the country principals and teachers who know how to appeal to their pupils, especially in the higher grades, so that the general spirit of square dealing can be made to predominate in their group life. Of course, the views of boys and girls regarding fair play in subtle situations is not so keen as it is among adults ordinarily, but it is sufficient in order to avoid most of the difficulties which occur on playgrounds, when the attempt is made to control the relations of boys altogether from the outside. When the principal makes the pupils in a school conscious that they are being watched, and if they are detected in error they will be punished, he is liable to develop in them the

tendency to match their wits against his. If they can get the start of him, they regard it as perfectly justifiable. One who has opportunity to listen to the spontaneous talk of pupils, especially of boys when they are away from school, can not escape being convinced that much of our discipline is of the nature of a challenge to pupils to get the better of us if they can.

The writer knows schools in which the sentiment of fair play has become so strong in the sixth, seventh, and eighth grades that no group of rough fellows could get an innocent boy into trouble, and lie about their conduct, without drawing upon themselves the condemnation of their fellows. The pupils as a whole know what is going on. They can tell what individuals or groups are likely to create a disturbance, even if the teacher can not detect them. And when an appeal is made to this sense of fair play, without any moralizing, but simply in a hearty, vigorous way, a principal or teacher can avoid such a playground tragedy as was described at the beginning of this chapter. If the boy in question had really been the victim of a group, that group would have acknowledged their guilt. If they had offended but had claimed innocence, the school as a whole could ordinarily have been trusted to act effectively in regard to the matter.

Before taking final leave of this special topic, we should notice a very important trait of childhood, which is often the cause of much trouble in the school-room. And to illustrate with a concrete instance: a ten-year-old boy, upon returning home from school recently, complained bitterly of his teacher because she had kept him after hours as a punishment for not giving her some facts he possessed regarding the misconduct of one of his playmates. He stubbornly refused to tell on his companion, and the teacher as stubbornly insisted that he would have to stay every night after school for a half-hour, until he became docile and obeyed her commands. He felt it would "queer" him with the boys if he should "tattle" on one of the group, and she thought he was wilfully disobedient, because he did not help her to find the offender against the law and order of the school. This is a typical case of discipline arising in many schools, and it is often a source of serious discomfiture alike to the teacher and to the pupils.

Group loyalty

Any one who knows the by-laws of boy life understands that "tattling" is regarded as about the worst possible offense in a member of a school or a gang. One of the first lessons which groups of boys, and often girls as well, teach a new-comer is that he must stand by the crowd, and not "tell" on any

one. He must keep its secrets against all inquisitors, whether teacher, minister, or policeman. To be loyal, to the members of your set is a fundamental law of any group, and this has proven of tremendous service in the development of society. However, this thing is doubtless carried too far often, by boys especially, who keep secrets which they ought to make public for the good of their crowd, as well as for effective discipline in the school and on the street.

But it does not seem to be a wise course for a teacher to go after an individual boy, and try to overcome his impulse to shield an offender who happens to be a member of his "crowd". It would probably prove much more satisfactory to all concerned if the teacher would deal with the group as a whole, and endeavor to develop therein a keen sense of fair play in the relations of the pupils to herself, so that any individual would not feel he would lose caste with his set if he should give publicity to offenses against reasonable rules of order, but rather he would gain with the crowd. It surely is possible for a school group to be made to appreciate that necessary rules must be insisted upon, and it will be better for every one if these are observed without any failure. If, then, one member of the group will not conform to the rules, but under-

handedly breaks them, his conduct must be brought to the light in order that he may receive his just deserts. A mode of procedure like this will preserve the group's feeling of loyalty among its members, and it will at the same time enable the teacher to secure the coöperation of her pupils in bringing offenders to justice, without any particular child being singled out as a "tittle-tattle". This sort of procedure is being followed with the greatest success in newsboys' associations and similar groups, in which the boys are less responsive than are school pupils to an appeal to the sense of fair play.

Gaining the respect of pupils

Many of these problems we have been considering arise from the fact that pupils do not have the proper respect for the teacher, whatever may be the reason for this. Have you ever happened upon a group of lively boys who were expressing themselves freely regarding you and your work? If you have heard them find fault with you, what has been your attitude in the matter, alike toward the boys and toward the faults of which they complain? Have you acted on the assumption that your pupils ought to respect you anyway, simply because you are in the position of teacher? Have you argued that if they do not respect you it is because they have not been properly trained, or that they are naturally vicious? And

have you attempted to develop different attitudes in them by punishing them, or perhaps by delivering a general lecture before your school upon the subject of "Respect for Teachers"?

What would you do in a case of this kind? A group of boys averaging eleven years of age are classmates in the sixth grade of a public school in a western city. They come from the "best" homes in that city. They have from infancy listened to conversation upon a great variety of topics relating to current events, to historical incidents, to art and music, to the phenomena of nature, to ethical and moral conduct, and the like. They have had opportunity to engage in all sorts of games and plays. Most of the boys have had gymnastic apparatus in their own homes, in the use of which they have developed skill and courage. They have organized foot-ball and base-ball teams. Taken as a group they can ride horseback and on a bicycle; skate, coast, play hockey; row, swim, and fish; shoot straight with the bow and the gun; use tools with considerable success;—in short they can "do things". But they do not know as much arithmetic or history, or geography as they should; and they do not know how to write good English, as they will need to do in maturity; and their parents send them to school to have these deficiencies corrected.

The teacher in this sixth grade has not had so broad and varied experiences as these boys have had. She can not use tools effectively, or row, or swim, or shoot, or ride a horse or a bicycle; she can not perform on gymnastic apparatus, or play foot-ball or base-ball; she is not good on the ice or the snow; and what is most serious of all, she has not read so widely as have most of these boys, and she has not listened to as cultivated conversation. So they are really superior to her in all these respects. She is not so strong physically as most of the boys, nor in as vigorous health, partly because of the severity of her labor, and also because of the serious way in which she takes her work, due largely to the fact that she is rather conscious of her limitations, so that she feels the necessity of being somewhat stern and austere in order to prevent any expression of disrespect from her pupils.

Why pupils lose their respect for a teacher

The boys comment upon her physical weakness, and some of them remark unpleasantly upon her lack of varied experience in life. She has not traveled as much as a few of them have; and when she teaches them geography she is dependent usually upon the formal statements of the book, while some of her pupils have seen the objects and places described, and they can fill in with concrete, first-hand facts

which the teacher, most unfortunately, tends to repress, because she does not know them herself. She is inclined to criticize pupils if they do not recite the words of the book, and stop at that. These boys have discovered, whether by their own insight or as a result of the comments of injudicious parents, that the teacher takes this attitude probably because of her shortcomings. Only one consequence can follow from this; her pupils are rapidly losing their respect for her.

This teacher shows up at her worst when she attempts to lead these boys in physical exercises in the school. She tries to set them a model for their imitation; but they are much more expert in the use of their arms and bodies than is she. They are quite ready in exhibiting their superiority, but she is self-conscious in respect to her abilities, and she scolds them for their "smartness." Inevitably this arouses antagonism and resistance in them, and they are looking for occasions to show their disrespect for her. The situation is an unfortunate one for all concerned. The teacher is really having a hard time of it, and the pupils are not profiting greatly by their school experiences. Indeed, some of them are being injured, because they sit in their seats day after day in this indocile attitude, which is likely to become a fixed habit with them. Nothing could be

more disastrous to any individual than to become habitually disrespectful toward those in authority.

Gaining the assistance of capable pupils

What course should the teacher follow in this particular case? It seems that the first thing for her to do would be to become perfectly frank with her pupils in acknowledging her limitations, and in recognizing their superiority in any direction in which they can excel her. Take, for example, a recitation in geography. If she should freely and without embarrassment say to her class that she had not seen Gibraltar, for instance, while she knew members of the class had seen it; and if she should cheerfully invite these latter ones to tell all they knew about it—to become for the time being teachers of the class on that topic—she would score several points in her favor. She would stand a good chance of winning the confidence and good will of her pupils; and they would be likely to admire her for her frankness, instead of finding fault with her for her lack of experience. Moreover, the class would profit more from such instruction than from what she is able to give them. A teacher should endeavor early to discover the activities in the school in which she can be a true leader, and win the respect of her pupils, and then she should concentrate her efforts upon these matters. Frankness and good sense in reference to

failings will help greatly to solve such a situation as the one that has been described; while the exhibition of anger, faultfinding, and suspicion will be fatal, alike to discipline and to teaching.

School-room injustice breeds disrespect

A teacher often loses the good will and respect of his pupils because he is not fair or consistent in his demands. Take, for example, the following concrete instances. The writer was recently an observer in the eighth grade of a city school. The teacher was a graduate of an eastern college for women, and she appeared to be well-informed upon the subjects she was teaching. But she had got the impression from some source that accuracy and speed were greatly to be desired in education, and she strove to attain these desirable qualities in much of her work, especially in mathematics, spelling, and all written exercises. The outcome of her method was especially apparent in her class in arithmetic. She dictated problems to her pupils, first warning them that she would give them but twenty minutes in which to write and solve seven of them. While the pupils were working, she urged them onward every three or four minutes in such terms as, "make haste"; "you are not working fast enough"; "I don't want any laggards in this school"; "some of you might better be back in the seventh grade than here."

Other stimulating remarks like these were thrown out during the progress of the exercise.

At the completion of the twenty minutes, all work ceased. The papers were exchanged and marked. Then they were returned to their respective authors, and the errors computed. It was found that most of the pupils made at least one error; and some of them made nothing but errors. Then the teacher "sailed into" these latter unhappy individuals. She asked them why they did not take time enough to do their work accurately. She said: "If there is anything I can't stand it is mistakes. One who makes mistakes isn't good for anything. If you can't do work more accurately you better go back to the third or fourth grade, and learn how to do it."

After the dismissal of the school for the day, the writer overheard two boys talking about the teacher. They said: "She yells at you if you don't hurry. Then if you do hurry and make mistakes, she yells at you because you hurry. There is no way you can keep her from yelling at you, anyway," and so on. The moral seems to be that if one must "yell" at pupils, he should try to have his "yelling" all along the same line, so that they will not get the impression that he is inconsistent and unjust.

A certain grammar school in a large city is situated on two very busy and very noisy streets. Even

Other cases

when the windows are closed, one can hear the clatter of hoofs, the rattle of wagons, and the jargon of drivers and pedestrians. The sixth-grade room in this school is so located that it gets all the noise of the street when the windows are open; and even when they are shut it is impossible to keep it out. The teacher in this room usually sits behind her desk and dictates words in spelling, gives explanations when they are asked for; and in short, she conducts all her work from this position. The children in the rear of the room often can not hear what is said. If they raise their hands as a sign that they have not understood, she charges them with being inattentive, and holds them up to the scorn and ridicule of their classmates. She makes it so unpleasant for them if they complain about her voice that they usually hesitate to inform her when they can not understand her, and they generally prefer not to hear what she says, than to take the chances of being scolded if they raise their hands. As a result the children in the rear often make mistakes, which are due solely to the fact that they can not hear the words which are pronounced, or the directions which are given. Then they are upbraided because they make errors.

Still another case may be mentioned. A certain teacher, who has been teaching for many years, has

fallen into the habit of holding examinations for three or four days at the opening of school each year. She makes these examinations "stiff", because she says she does not want any children in her grade "who haven't brains." Twenty minutes after the pupils are in her room on the first day of school, she gives an examination in grammar. She asks of these eighth-grade pupils numerous questions which could not be answered by their parents, some of whom are "highly educated." These pupils have, of course, not been thinking about grammar for at least nine weeks. What brains they possess have lost the grammatical habit more or less during the nine weeks of out-of-door life, but the teacher has refreshed herself on these important matters, so that she may be ready to display her learning before her pupils.

Following grammar comes one examination after another. As might be expected, there are a good many failures. Even the best pupils make numerous errors. Then comes the season of strain and stress, when the teacher tells the pupils what she thinks about them. We have it on the best of authority that for at least twelve years this teacher has told every new class that they were the most ignorant good-for-nothings she had ever had. She threatens to exclude a third or a half of the class, sending

them back one or two or three grades "where they belong". Usually several pupils are prevented from going on in her room; and once she refuses to receive a pupil, nothing will do but that he must spend a whole year some place else. In the past, the principal and the superintendent have intervened in certain cases but without success. They say the teacher is so strong in most ways that they think it better she should be humored in this one regard.

Some teachers think it is a sign of their own high standards if they find fault with the work of the teachers who have preceded them, and humiliate every new class that comes to them. In discussing this matter recently a prominent city superintendent said: "I think I have succeeded in impressing upon each one of my teachers the conception that it is their business to take any pupil sent to them and teach him according to his needs, and not to find fault with what he has previously had. If one of my teachers gives an examination at the opening of school, she does it for the purpose of finding out how she is to instruct her class, rather than to complain over what they do not know. No teacher in my force ever tells me but once how poorly her children have been taught by the teachers who have preceded her." It would seem that this would be a good policy for all superintendents to adopt.

The teacher last referred to seems to find pleasure in taking the heart out of some of her pupils. She tells them they do not amount to anything, and probably never will. This attitude, frequently to be noted in teachers, suggests a very important principle of discipline. One point of view respecting it may be presented in a quotation from an educational article in which a professor gives expression to some pessimistic views respecting certain tendencies in modern schools. He says in part:

Feelings of success, not of failure

"Teachers do not make pupils feel the seriousness of their work so much as they did when I began teaching. In those days we never hesitated to make a pupil bear the misfortunes of his conduct, or his failure to prepare his work properly. We used to think that it was even a better discipline of pupils to make them conscious of their failures than to reward them for their successes. Now teachers seem to take a different view of this matter. And I should like to ask how pupils are to gain in strength if they are not made conscious of their shortcomings so they can guard against them and rise above them. I would rather a boy of mine should learn that if he ever makes a mistake he is going to hear from it, than to have his successful work made too prominent. The method that was in

fashion when I started teaching produced strong men, and I doubt whether the modern methods can accomplish so much."

As to the question whether it is better to make a pupil more conscious of his failures than of his successes in order to develop his moral and intellectual vigor, the present writer takes a view contrary to that of the author quoted above. It is a simple principle of human nature, that if you magnify one's failures you are more likely to weaken than to strengthen him. Let a person endeavor to speak to his fellow citizens, say fifteen times, and fail every time. It is practically certain that he will fail the sixteenth time and every time thereafter, unless he ceases trying for a period, and has experiences which will give him feelings of success. As long as he is possessed by the fear of failure, the chances are he will fail. Nothing could be more simple than this, or more freely illustrated in the happenings of daily life.

What we want to do as a rule is to fill the minds of our pupils with the thought of themselves as succeeding in whatever they undertake. Of course, if they are careless or indifferent or reckless, and in consequence thereof fail in what they take up, then they must temporarily be made exceedingly conscious of their failures in order that they may exer-

cise caution, and give proper attention to the task to be performed. But as speedily as possible the consciousness of failure must be supplanted by that of success. A child who is not succeeding in spelling, say, so that he is required to go to the foot of his class every day for a time, is likely to become dominated by the fixed idea that he can not stay at the top no matter what he may do, and he will inevitably be harmed by getting into this frame of mind. If there is any way to give him the feeling of himself succeeding in competition with his fellows, the teacher must make full use of this. She must arouse the consciousness of failure only as a preliminary to putting greater emphasis upon success.

Suppose one should review the work of a single day in any school, and should find that most of what the teacher has said has related to failure of one sort or another, and that in her relations with individual children she has constantly emphasized their faults. What would probably be the outcome upon pupils of that day in school? Let any teacher go over his own experience in this regard, and see whether he has been helped most by encouraging or by discouraging suggestions. Who has done him the most good, the friend who has talked to him about his successes, or the one who has constantly held before him his weaknesses? In this connection a

teacher might consider whether she will help or will injure pupils by prophesying failure in much of what they undertake to do.

The principle of making success and good behavior more prominent than the opposite in any school-room suggests a vital problem of discipline which different teachers solve in different ways, as illustrated in the following cases. In a city in the Middle West, two teachers have in their care pupils of about the same age and of the same general character. Some of the pupils in both these classes come from homes where courtesy and gentleness prevail, while other pupils come from homes of a notably different sort. So the problems of discipline in these rooms are unusually difficult. The children from the so-called better homes are accustomed to a good deal of freedom, and they do not always know how to interpret the attitude of the teacher who chastises them for activities which are thought to be entirely proper in their own homes, and for which they are often commended by their parents and friends. The children from the so-called poorer homes are rather callous to the ordinary disciplinary measures of the teacher; and her complaints and comments on their behavior slip off their minds as easily as water runs off a duck's back.

As a rule, correction should be individual and private

The teachers who have charge of these classes at present show very different conceptions of how their problems should be solved. In one room the teacher always gives publicity to each case of correction. She corrects any individual pupil in such a way that every one in the room can hear her criticisms. She has the habit of speaking to the school as a whole, usually at the opening exercises in the morning, of the typical sorts of misconduct which should be guarded against. Being under strain and stress, her voice reflects her tension so that pupils usually feel she is complaining. The effect of this method upon the school is to give prominence to the work of correction, so that this is really more conspicuous than the instruction itself. The pupils all feel it, though they are not always explicitly conscious of each case of discipline. But nevertheless the air is surcharged with criticism, faultfinding, and the administering of penalties; and these are the matters pupils talk about outside of school.

It should also be quiet

The second teacher referred to pursues an altogether different method in the discipline of her room. She rarely speaks to a pupil by way of correction before the entire class. If she finds it necessary to "talk to" any child during the progress of the work, she goes to his seat, and speaks to him as privately and quietly as

possible. Of course, the class may realize that discipline is being administered, but it is accomplished so inconspicuously that it is rather impressive than irritating. *Quietness* and *privacy* are the predominant characteristics of this method. Now, quietude in the leader of a group always suggests quietude to those who are being led. And the opposite of this is equally true. Much of the discipline of this room occurs when most of the pupils are not present at all. During the day the teacher jots down the names of those who need to be restrained in respect to some tendency, and she invites them to remain with her after school. She then has a conference with each one privately, so that the full force of what she says may be spent on him alone. In nine cases out of ten probably—though not in *every* instance—this will have a much better effect than to try to discipline an individual when there are fifty onlookers, who usually sympathize with the victim. In the latter case, the force of criticism or exhortation is apt to be nullified; though if the group be in thorough sympathy with the teacher's program, and reinforce her commands, the result will be more beneficial than it could be under a different method. But the constant public presentation of criticism will fail in the end to secure the right sort of response from the school as a whole. Occasionally it should be used

in serious cases of discipline, and then it may be a valuable aid to the teacher.

As a general proposition, it can be stated unqualifiedly that he is the best disciplinarian who deals most directly with individual offenders, and he is the least successful who makes all his discipline so conspicuous that every one is affected by it, thus creating an atmosphere of unrest and disorder. The chief aim of the teacher should be to make the legitimate work of the school most prominent. His voice should be heard in praise and instruction far more frequently and predominantly than in fault-finding and correction. Often teachers get into the habit of complaining about restlessness and noise in a room, charging the entire group with misconduct, when only certain individuals are at fault. This is wrong; it tends to spread disorder in the room, and to impress it upon the minds of pupils as the really vital thing in a school. Ask a pupil in such a school what has happened during any day, and he will be likely to speak of cases of discipline, and of the angry expressions of the teacher. It is human nature perhaps to follow the plan of criticizing and complaining publicly when matters are not going right in a school-room; but one must fight against the tendency, and deliberately cultivate a different mode of procedure in this important phase of teaching.

The problem of communication in the school-room

Before leaving the subject of fair play in the school-room, something should be said regarding the chief source of conflict between the majority of teachers and their pupils, though it has been referred to in the preceding chapter. In all times teachers have been troubled with the problem of communication. Young teachers especially are generally much perplexed over the apparently uncontrollable impulse of children to "whisper" in the school-room. It does not take long for a novice even to realize that if the work of the school is to be accomplished, pupils must concentrate their attention upon the tasks in hand; which is not likely to be the case if they commune with one another whenever they "feel like it". The chances are that in such communication they will discuss topics foreign to their studies. In the consideration of this subject at a recent teachers' convention, all those who spoke upon it maintained that when communication is permitted during school hours, the attention of the children is usually distracted, because they do not talk about their work. The interests they wish to visit about lie outside of the school, and concern the incidental happenings in the school-room. Often they will communicate regarding some peculiarity of the teacher in manner or dress, or some trait of

a classmate which tends to excite hostility or ridicule. Probably most teachers will agree that the legitimate work of the school does not stimulate children to communicate with one another as do most extra-school activities. Herein lies the chief difficulty in respect to communication in the schoolroom.

The impulse to communicate

We ought at the outset to appreciate that the impulse to communicate is one of the deepest and most urgent tendencies in child life. Evidently nature says to a human being: "Share your experiences with your fellows. Tell them all that happens to you, and try to get them to tell you their experiences. Talk over the traits of other people with your friends and associates. Keep nothing to yourself, and do not let other people conceal their experiences from you. By making everything public in this way, you will give others the benefits of your experience, and you will at the same time profit by their experiences, so that whenever anything valuable has been discovered all may profit by it. Also, if you express yourself freely regarding the traits of those around you, you will as a rule help to conserve what is best and to eliminate what is objectionable in the conduct of people. If every one will talk about these matters freely, a sort of public opinion will be estab-

lished, and this will effectually control the behavior of most persons to whom it relates. If you do not communicate with others respecting their experiences and your own, and if you do not present your point of view regarding other people and get their opinions regarding you, then every one will be likely to go on in his own way, and it will be impossible to determine what really is permissible in people's actions, and in what respects they ought to restrain themselves."

Any teacher who will observe a child from two years on, can not fail to note that his most absorbing ambition is to have people react upon what he does. If he builds a toy house in his nursery, he teases every one in his home to come and examine it. What he wants is their approval; but if they should condemn it, or be indifferent regarding it, it would be a sign to him that he ought to abandon that sort of activity. To give a better example: suppose he catches a bird, and begins to pull off its wings, and he calls to every one around to observe him. Suppose people react in a hostile way to his performance. Let them show in their faces, in their bodily attitudes, and in what they say that they disapprove of this conduct. The chances are that the child will not try it again; in many cases one experience will be sufficient. But suppose that instead

of condemning him for his action, the people praise him for it. Suppose they laugh at what he does, and so make him feel that he is doing a clever thing that others enjoy, which is just what is likely to happen in a typical "gang". In such a case the boy will regard his act as a means of entertainment for others, and one way of gaining distinction for himself; and he will be likely to repeat it every time he gets a chance, when he thinks there is any one around to appreciate it.

The instances cited are very simple, commonplace illustrations of the passion of the child to have others view his thoughts and his actions in order that he may discover which ones will please the people around him and bring distinction to himself, and which ones will arouse the hostility of others, or win him a bad reputation. Of course, the young child is not very sensitive regarding his "reputation," except in respect to a very few matters, such as being a "coward," or being "mean," and so on. But as he develops he becomes increasingly anxious to have a good reputation in respect to more and more subtle qualities of body, intellect, and character, and he is always eager to express himself in the presence of others so as to secure their approval for the acts which he regards as most worth while. It can be seen that without this trait social adjustment would

be impossible. If a child should live to himself alone, without caring to express himself in the presence of others, or to have them express themselves in his presence, he could not become a social being. Communication between people is the fundamental requirement for the development of social feeling and social ability.

Before the child comes to school he is usually given great freedom in sharing his experiences with those around him. Parents ordinarily allow their children to communicate freely on every topic which interests them, and to solicit communications from their playmates. Perhaps at table the child may be given some lessons in restraining his passion to express himself. But in modern American life children are granted a large measure of freedom to express themselves at table, and in all other situations in which they are commonly placed. Indeed, children who tell their experiences readily are regarded with more favor in America than are those who are inhibited in this respect. Free communication is, as a matter of fact, generally rewarded outside of the school-room, so the tendency is actually fostered in children, at least in present-day American homes. Thus when the child comes to school he is really without much, if

Outside of school the child is encouraged to communicate freely

any, experience which has taught him while in the presence of others to "hold his tongue".

Fortunately the atmosphere of the school-room is usually different from that of his home or of the street, and this tends to restrain him in a measure. The more he feels the dignity of the teacher and the school-room, the more inclined he is to be self-restrained, and to become attentive to the expressions of the teacher and of his associates. In most familiar situations outside of the school, the child spontaneously expresses himself as the occasion requires; but in the class-room, where the whole régime suggests that action should be based upon the initiative of the teacher, he is apt to concentrate his attention upon the teacher as a leader, instead of heedlessly following his own promptings. In an environment in which he feels perfectly at home, the individual generally seeks to take the lead; but in a new and strange environment the tendency is for him to become a learner. Now, if the teacher can keep him in this attitude, so that he may continue to feel the dignity and importance of the school-room, he will be likely to remain docile, seeking constantly to discern the teacher's plans, and striving eagerly to follow her directions. In such a case he will not give much trouble on account of "whispering", because he will feel the necessity of

apprehending the expressions of the teacher and of his associates, whenever the latter are asked by the teacher to express themselves.

The most effective way to control the evils of communication

The best way to control the evils of communication is to keep pupils in a learning, docile attitude, so that they will be alert always to the suggestions which the teacher makes, and aim to follow them. If they can be made to see that the regular work of the school is interesting, and that it is worth while to master it and to show that they are getting it in the proper way by expressing themselves when they are given opportunity to do so by the teacher, then their communications will be legitimate, because they will concern the proper activities of the school. The problem is one of really making the work of the school dominant in the class-room. In every well-governed school-room pupils are made to feel that the best way to attain distinction is to show a mastery of the regular duties. Doubtless some readers will object to this, because they think it improper to commend a pupil in any way for excellence in the work of the school. But until human nature is fundamentally changed, it will be necessary in order to stimulate pupils to give proper attention to the work of the school and to restrain tendencies hostile thereto, to cause them

to realize that when they do adapt themselves to the régime of the class-room and express themselves effectually regarding it, their faithful and successful work will become known to classmates, to parents, and to others. Possibly their names will be published in the city paper even, and thus their distinction will go beyond the confines of the school-room.

Devices for suppressing communication

It is certain that harmful communication in the school-room can not be satisfactorily controlled when the pupils feel that it is not of much account to stand well in the regular work. Many teachers resort to all sorts of devices to restrain communication, except the most effective one of teaching in such a vital, vigorous way that the interests of the school predominate over those of the life outside. Pupils are made to report at night how many times they have whispered during the day; tasks are assigned as penalties for whispering; the seats of the pupils are shifted about frequently to see if communication can not be restrained by changing seat mates; and often pupils are kept after school for whispering, or whipped for it. But really, punishment can not permanently restrain communication to any appreciable extent, though it may be the only remedy on certain occasions. But if pupils can not actually whisper, they may nevertheless communicate constantly

through the eye, or by means of grimace, gesture, "deaf-and-dumb language", or bodily contortion. One may see school-rooms in which certain pupils are communicating constantly, though they may not speak a word to one another. The only way to control such pupils is to get hold of them in some way on the side of their interests; or if this is impossible, to eliminate them from the school-room. Sometimes one finds pupils who can not be made to appreciate the work of the school, and who have a hostile attitude toward it. Such pupils tend to ridicule the school and its work. They may strive to annoy the teacher, and to distract others from their duties. In short, they may try in every way they can to upset the order of the school. They ought to be removed, and put together in a school where their special needs can be properly looked after.

The evil of communication in any school-room could be greatly lessened if frequent intervals could be arranged for, during which there could be complete freedom for pupils to visit with one another. Suppose that with young children there should be three minutes of visiting after twenty-minute periods of study or recitation. This would serve to release the tension which is developed when pupils can not communicate. During the three-minute intermissions, pupils could gratify the passion to express

themselves spontaneously, and they would then come back to the regular work in a different attitude from that which they will have if kept at their tasks without a break. It could be made to seem reasonable to pupils that if any particular individual could not restrain himself during the period of work, he should forfeit the period of relaxation. If the pupils as a whole will not preserve silence during the working period, then the relaxation period will have to be withdrawn. It is in accordance with human nature that one should deny himself pleasure for the moment in order that he may secure it in more abundant measure later on, and it is proper that the teacher should utilize this in the discipline of her school

It should be appreciated that harmful communication in the school-room is dependent in large measure on the personality of the teacher. A "weak" personality can not control the spontaneous impulses of the young. It is a simple psychological situation. Pupils come into school bringing with them interests which have engaged their attention outside. If the life of the school-room is not stronger than that without, then they are going to keep on with this extra-school life, even in the class-room. That is to say, they will communicate about it, and will make fun of the situations in the school. We all tend to

follow in the lead of a strong personality, while we always try to dominate those weaker than ourselves, or at least we refuse to be led by them. So in the school-room, one must be a leader in a large sense in order to cause pupils to give attention to the legitimate work. One who by nature is lacking in the quality of leadership, which will command the attention and obeisance of pupils, ought to abandon the teaching profession, for otherwise his days will be full of misery. He might succeed admirably in a situation in which the quality of leadership was not essential; but it is the chief requisite in the successful control of the school-room.

CHAPTER IV

TEACHING PUPILS TO THINK

THE writer has been examining a large number of programs of teachers' associations, with a view to noting what topics are most frequently discussed in our times. In many of them appears the subject, "Teaching Children to Think". Looking up the proceedings of some of the associations for the last few years, and reading what has been said on this topic, it seems that a majority of those who have discussed it maintain that there is some definite formula for thinking which can be taught the young. Various rules are given for developing thought in children; but it will not be worth while to reproduce them here. The present writer believes that practically all of these rules are mainly verbal and formal, and prove useless when applied in the schoolroom. It is hardly in accord with present-day psychology to speak of *teaching the power of thinking,* as though it were an art dissociated from the actual processes of thought. When an individual interprets any immediate experience in the light of past

experiences, so that he can adjust himself aright to the new thing, he is thinking in a vital way. Whenever he reacts upon the phenomena occurring about him so that he can trace the causal relations between them, he is thinking. The only function of thought is to organize experience and use it to help one adjust oneself to new situations.

Is it impossible, then, to develop in a novice the ability to think, as the phrase is popularly used?

Necessity the spur to clear thinking

If we can, from the beginning, put a pupil in situations where he must discover the vital connections between objects and phenomena in order to adapt himself to them, we can give him a set in the direction of trying always to find true relations. The race has developed the power of thought through endeavoring to secure more complete control over the environment. No one would ever acquire thinking ability unless he were in need of it to gratify his curiosity, or to minister to his wants of one kind or another. Necessity is the mother of intellectual acumen. If one should put pupils in a seat and ask them to memorize the words of a text-book; and if he should then test their success in learning by requiring them to reproduce the words verbatim, he could not arouse genuine thinking activity in these pupils, no matter what formulæ he might employ. The human mind is not

built on that plan. The chief reason why pupils do not learn to think as we wish them to is because our teaching situations often do not require thought, in the sense in which we use the term. Many of our school-room exercises employ verbal memory largely, if not wholly.

When a pupil is required to make a box, say, of prescribed dimensions, and for a definite purpose, he has a constant and unvarying standard by which to test the efficiency of his thinking. When he is brought face to face with a concrete situation where things must be made to fit together, or operate together, then he is compelled to think, and he is made sooner or later to realize that he can not go on in a mechanical, verbal way, and come out right. Whenever a person is obliged to make things *work*, he will think as effectively as it is possible for him to do. If in our teaching we can arrange a program of exercises of this concrete, dynamic character, we can keep pupils thinking up to the limit of their constantly enlarging capacity. Really the art of teaching consists mainly in realizing this plan to its fullest extent in all studies—in arithmetic, geography, nature study, language, and all the rest. It should be recognized in this connection that some of the greatest thinkers among us have never been trained in the schools; and some of the men one knows

who have been through all the schools are babes in thinking ability. Of course, these are extreme instances, but they illustrate the psychological law involved in the problem before us.

The supreme test of a good method

The more one sees of teaching the more convinced he becomes that the genuinely successful teacher is the one who knows how to bring pupils to the point where they can see things as they are, and can discover the causal relations between experiences. In schoolrooms where pupils have got into the habit of going to class and reciting memoriter the words and rules they have learned, the skilful teacher will follow them right through, and cause them to deal with concrete cases and illustrations, in order to show whether they actually *know* what they are talking about, or whether they are just *reciting*. There is no cut-and-dried method of accomplishing this, but it ought to be the chief concern of teachers from the kindergarten through the university. In this way, pupils may be got into an attitude or habit of thinking, so that in due time they will, as a matter of course, endeavor to discover the causal connections between all their experiences, which, as we have seen, is the only reason for which thinking has been preserved in the race.

Recently the pupils in the junior class of a high

The test applied to a history lesson

school were required to write down a list of "forty important events which happened in European history." They were expected to give the exact date of each event, and the names of the men and women connected therewith. It was not asked that any relationship be shown between the different events mentioned. The whole forty might relate to a particular period, or might concern any one man even, provided the pupils could hunt up forty of his deeds which were of sufficient importance to become matters of record. The aim of the teacher in assigning this task was to compel her pupils to "memorize at least forty events covering the period of European history which had been studied."

In executing this task the pupils made constant use of their text-books. They would start looking through the table of contents; and when they came upon a phrase such as "The Battle of Waterloo", they would make a note of the date and event. Then they would run on until they came across something else that seemed to be an "event," and they would jot it down to be memorized. Frequently the pupils would ask one another, and any older persons to whom they could gain access, whether "The Battle of Waterloo" was really an "event", or what it was. They said the teacher made it absolutely imperative

that they should get only "events". When some of these pupils were asked what there was in history besides "events", they were unable to respond. And what is more serious, they were not very much interested to find out what else there could be. What they wanted to do was to get the *names* of forty events in order to meet the test which the teacher would make at the appointed hour. The present writer tried out some of these pupils by asking them what difference there was between a *cause* in history and an *event;* and there was not one reasonably satisfactory answer given. The responses indicated that these particular pupils had gained no clear notion of causes operating in European history. They had been impressed mainly with the supreme value of unrelated dates, names and events.

Formal exactness rather than effective thinking

Certain of the pupils being observed with reference to their method of performing this task, it was noticed that their chief fear was that they might not get the *exact* dates. They were sure it would not be satisfactory to say that a given event occurred in *such a period* or *about such a year*—for instance, that Alaska was purchased *about* such a time. The precise year must be memorized for the examination. But it was evident that the exact year for any event would not be permanently remembered. Al-

though the class had previously been over these events, it is significant to note that not one pupil in ten could be sure of any date without hunting it up in his text-book or elsewhere. What possible value could it be to these pupils to try to remember forty dates? Was it not a positive injury to right historical thinking to require the memorizing of the precise year of an event by novices, since this would be forgotten, and the event itself would not be located in its relation to other events in European history? If the pupils had been asked simply to learn about when, and especially in connection with what related events any event occurred, they would have been more likely to have got a feeling for the relation of important periods to one another.

The chief defect in such a lesson as the above, which is typical of much that may be seen in the schools, is that it fails to exalt what is of prime importance in the study of the subject in hand. If the teacher had said, "Bring me an account of five events in European history, and show me what led to these events, what followed them, and how European life and history were affected by them," she would have drawn the attention of her class to knowledge of genuine value, and within the range of interest and capacity of pupils in the junior year of the high school. It will not be doubted by any

one who has reflected upon it that the service of history in education is dependent upon the extent to which the ability is thereby developed in pupils to trace causes and effects in human society. The memorizing of isolated historical events can hardly be of value in any individual's life; and what is of chief consequence, when much work of this sort is required of him, it tends to establish a habit of mind which makes him content with the mere acquisition of disjointed facts, which is hostile to the development of thinking ability.

Historical ideas that relate to every-day life

While we are considering the teaching of history, attention may be called to the *character of the ideas* presented, as well as to the *method* of presenting them. We wish our pupils to gain from their work in history some help in thinking straight in respect to matters of contemporary interest in society. But can this be accomplished when instruction relates mainly to war, and but very little to peace? The writer has just come from a conversation with a high-school sophomore regarding his study of history. It was an informal talk about the matters that have interested the boy in the history he has studied in the elementary school, and during his first year in the high school. In this conference the fact that impressed the writer most deeply was the boy's strik-

ing ignorance of the men who had contributed to the literary, esthetic, commercial, educational, and religious development of the race, and particularly of our own country. He is rated as a good student, in both the elementary and the high school, and he probably has gained as much from his history as any of those who have been taught with him; and yet here in the sophomore year of the high school, history is to him principally a record of wars. He knows the names of many of the military heroes of ancient and modern times, and he can talk intelligently about the outcome of some of the world's great battles; but in school his attention has been called in only the most casual way to the really vital movements in the history of mankind. He knows something about Napoleon, but practically nothing about Pasteur. He can describe the principal achievements of Wellington; but Darwin, Herbert Spencer, and Gladstone are mere words to him. This boy apparently knows little if anything about the *life* of the Greek and the Roman people, except such of it as was displayed in their military adventures. He has read somewhere of Raphael and Angelo, but he has no distinct idea what they have contributed to the development of the race. He can not recall that he has ever heard of Pestalozzi, Fröbel, or Horace

Mann; but he is well up on Washington, Stonewall Jackson, and General Grant.

How much longer must we continue to teach history as an account principally of war and military heroes? Is it impossible to interest students of any age in heroes of peace as well as in heroes of war? Can it be that it is more important for a boy to know who has fought the battles of a nation than who has contributed to its peaceful development? What would be the loss to the average elementary and high-school student if the tale of war in history should be reduced to one-tenth of the importance which it now occupies in some places, and other interests should receive attention in its stead? If we could train up a generation of boys and girls who knew less about the wars of the world, but much more than they now do about the struggles of man to overcome disease, to subdue the earth through science, to increase the comfort and safety of life, to make education universal—if we could do this, would not our civilization be more stable than it now is? And would not individuals be more capable than most persons now are of adjusting themselves to a peaceful order in the world, and thinking clearly in respect to the problems which now confront us?

This leads on to the question of teaching pupils

to think straight in respect to the problems of modern social life. Not long since, the writer was a guest in a class-room where first-year high-school students were studying civil government. They had memorized verbatim the constitution of the United States; and at this particular time they were learning the composition of the national congress and its functions. The teacher stated that it was the plan to have classes learn how the state legislature was organized, how its members were chosen, and what part the legislature played in government. Finally, they were to learn the organization of city and town government, following the plan of the study of national and state government. The work was almost wholly a memory exercise on the part of the pupils. In a formal, remote way they analyzed the thing they called government, much as they would dissect a plant or an animal in the biological laboratory. They classified the parts of the governmental organism and described the function of each, but they were not led to appreciate the living whole as it manifests itself in life, and as they are related to it. One sometimes sees a student dissecting a plant who has little knowledge of the conditions under which the plant lives, its provisions for maintaining life, its struggle for existence, and

Lack of effective thinking in civil government

the relations which exist between the plant and the animal life about it. The plant is to such a student a rather lifeless thing, without relations, and largely without function. He simply follows a formal rule in separating it into parts, which he describes mechanically according to his formula. If he should see the plant in nature he might be unable to identify it. It is practically certain he could not give its life-history, or tell any significant fact about its contest for survival, and how it serves or injures man or other creatures.

Now, the students in this particular class were studying civil government in some such remote and ineffective way as plants are often studied in laboratories. They learned the names of offices and their incumbents at the time then pending, and they described their duties according to the formal method of the text-book. But just what part the congressman from their district played in determining the welfare of people in their community, as a society and as individuals, they could not tell. The pupils will leave that class without any adequate idea of government as a living, vital, dynamic thing. So far as their study is concerned, they will be quite unable to think clearly concerning the problems of contemporary interest in government; and it is reasonable to say that very little has been done for them

which will help them to be better citizens, when it comes to deciding any complex question of social action.

Developing clear thinking by a different method of teaching

Here is the way a group of boys about eleven years of age were taught to think effectively in respect to problems in civics. The lessons started with observations of a voting booth. The boys were interested in watching the men come to the booth, get their tickets, retire into a private room, emerge therefrom in due course, have their names called out, and their tickets received by the inspectors. The question arose why the men had to go into a private room, and this gave opportunity for a twenty-minute discussion on the question of corruption in voting, and how people have had to devise some way to prevent bribing voters, or coercing them into voting a certain way. The Australian method of voting was considered; and the chances of any one stuffing the ballot-box aroused unusual interest. The boys were led to see why it was necessary for every man to have his name on the voting list, and why it should be called out when he deposited his ticket.

The following day the tickets left over from the previous day were distributed among the boys, and a discussion was held upon the different offices

which had to be filled. It was a town election; and the officers elected were a mayor, several aldermen, several justices of the peace, a clerk, and a treasurer. The boys were greatly interested in determining why each of these officers was needed in the town. Why could not one man attend to all the business? What would be the result if there were no clerk or treasurer or justice of the peace in the town? How is each resident of the town benefited by contributing to the support of these different officers? What would happen if the offices were all abolished? Who is the most important officer in the corporation?

For the next day's lesson the boys were asked to mention one or more respects in which their own comfort or safety in their homes or on the streets was dependent upon faithfulness on the part of the various officers of the town. Every boy came to the class with several suggestions of ways in which all citizens were helped through the activities of these officers. Most of the boys agreed that without water, for instance, furnished by the town and under the charge of a supervisor of waterworks, life would be very different from what it now is in most places. The same is true in respect to light for the streets, homes, and stores, and so on.

Next, the boys were led to inquire how these various officers were supported, who determined what

Thinking straight on the subject of taxation

work should be done, how the various officers received their pay, and so on. This led finally to the subject of taxation—usually a most difficult topic for children. But when it is approached from this standpoint, the necessity and the method of raising funds to defray public expense can be made reasonably intelligible even to pupils eleven years of age. In this manner, basing everything that was discussed in the class upon actual situations which children could observe, the government of the town was worked out in detail. At every point questions were raised respecting the danger of officers neglecting their duty; the desires of some men to get more than belonged to them; the necessity for every one to take a hand in seeing that money was not wasted in doing all these things that must be done in every community in order to protect the people and provide for their comfort. All manner of suggestions came up in the class regarding ways in which money could be wasted and officers could be unfaithful; and as a matter of fact every suggestion made related to forms of corruption which are apt to appear at one time or another in the development of any community.

After the organization and government of the city had been gone over in a very concrete way, the

Tracing governmental relations in social groups

question of the relations which people had to the government of the county came up. These pupils had hardly any notion of what the county is, and why there needed to be this unit in government. However, they were led to see that it would be convenient and more effective to have the people living in a section twenty miles square, say, govern themselves in certain respects than to have the government come from some central place in the state or the nation. It was shown that in supervising country schools, for instance, it would be best to have a section called a county, which could be looked after by one man. The teachers in this section could gather together at one place for instruction, and so on. It seemed to be simply a matter of convenience to have the state divided into smaller sections.

Then the pupils were led to see that there had to be some general control over the various counties, and we call this a state government. The boys knew that there was one man from the town who had been sent by the people to the capitol of the state, and they were instructed to find out why he was sent there, and what his duties were. They knew there was a governor, and the question arose—What duties has he to perform that are not attended to by the officers in the town or in the county? Could this

particular town get along without having any governmental relations with other towns? Is it necessary that there should be some one over the mayors and other officers in all towns? If so, in respect to what matters would he have authority? It was not possible to make every point perfectly clear to these pupils; but all that was essential was appreciated by them.

It became perfectly apparent to them that any one town or county is so closely related in many of its interests to other towns and counties that its welfare will be best promoted if it lives under certain general rules which should apply to them all. These general rules must be determined by people chosen from the various communities, and they must be enforced by some man who will take the part of the mayor in the town. Further, these rules must be interpreted by some persons who will take the part of the justices of the peace and the city judge. There was no verbal memorizing in this method of study. The pupils first appreciated the necessity for organization and government, and this made the learning of the names of officers seem simple and natural.

Finally, the question was raised whether any one state could get along best without regard to other states. Or do all states have some such relations to one another as towns and counties do, which

require that they should live under certain common rules that should apply to them all? Once the idea of state government was made clear to the pupils, it was easy enough for them to get the idea of the necessity of a national government. They had no difficulty in working out the main requirements in respect to national government, and the functions of the various officers.

It is not too much to say that there was not a barren or dull lesson in this series. And the pupils have acquired an insight into the nature of government, both local and general, which, if it can be extended as they go through the schools, will be pretty certain to make them intelligent and dynamic when they come to play the rôle of citizens. The principal characteristic of this teaching was that it made the entire business perfectly reasonable and natural. There were constantly kept before pupils these queries: What rules are necessary in order that people should live together in the best way? Who should make these rules? How should the people be selected to make them? What should be done to persons who will not observe them? What is necesary in order that it may be found out whether a person has broken a rule or not? And so on. This sort of teaching will not only lead pupils to think straight in regard to government, but it is likely to

arouse in them a keen interest in the matter, and a disposition to take a hand in it when they shall be given an opportunity so to do.

Let us now pursue our principle of clear thinking into the field of mathematics.

Clear thinking in arithmetic

The writer was recently asked by a teacher in the fifth grade to suggest an explanation of the constant failing of one of her pupils in his arithmetic work. She said he was a bright boy in most subjects; and he was always in earnest, and eager to get a high standing in his studies. He appeared to be in good health, and was unusually vigorous in his play out-of-doors, so that one would expect him to excel in "reasoning" branches, as the teacher said. In the class in nature study he was easily the brightest pupil. He was alert in observing the essential points in whatever was taken up for study; and he was ready and accurate in discovering relations between things, and drawing really sound inferences from what could be seen. In short, he was a thoroughly normal pupil, endowed with good physical and mental vigor, and his failure in arithmetic appeared to be a mystery.

It should be stated that he was not particularly ready and accurate in the fundamental operations. He was not so quick as some others in his handling of figures, even in the simplest processes. In going

over his work in school and outside, it was found that he had probably not had enough drill in the rapid use of numbers. He was not so much interested in that kind of thing as he was in work which was more concrete, and which required the use of his hands. True to child nature, he moved along the lines of least resistance; so he went on from grade to grade without becoming facile in handling figures in addition, subtraction, multiplication, and division. As a result, when he reached the fifth grade and had to work rapidly in order to solve the problems which were assigned him every day, he made frequent errors, even in the fundamental operations; with the outcome that he began to feel that he could not avoid making errors. It was the regular thing for him to receive not more than fifty per cent. in his arithmetical work. Naturally he lost his courage in attacking his arithmetic lessons. He began to feel that he should fail anyway; and what was the use of trying? When a pupil reaches this stage in any subject, the chances are he will not progress rapidly.

Mere verbal reading of problems

But the principal source of his difficulty in the fifth grade was that he had not acquired the habit of reading his problems so as thoroughly to comprehend what the conditions were. He would get a general and hazy impression of the conditions in a problem; and

then when he came to solve it, the chances were that he would not see the relations in the right way, and so his work would be erroneous. When I became interested in him, I asked him at the outset to read and interpret orally every problem which had been assigned him by his teacher. Out of six problems to be solved the first day I worked with him, he understood only one correctly. He had not learned to read problems with sufficient attention to each factor. In an arithmetical problem every word is significant, while in the ordinary reading lesson it is quite different. This boy could get impressions from his reading lessons readily and with sufficient accuracy to meet all requirements; but in arithmetic this may not be enough.

The first work which was required of him was to read one problem at a time, and to explain in his own words what the relations in the problem were, and to supplement his interpretation by diagrams whenever possible, which could be easily done in all problems requiring the determination of lengths, areas, volumes, etc. In problems involving operations in weights, measures, money, etc., the boy was asked to illustrate actual relations by using the proper units. In this way he constructed each problem concretely. After a month's work of this kind, there were very few problems encountered, the con-

ditions of which the boy could not illustrate concretely in some way. In the last resort he could by gesture indicate the relations described in his problems.

After a few weeks' work of this sort, the boy's improvement in his arithmetic was occasion for remark on the part of his teacher and his classmates. He is not yet always accurate in his fundamental operations; but he has made the beginning of a habit of finding out definitely what a problem means before he attempts to solve it. He can now be set six problems a day to solve, and he will write out in his own words the relations described in each problem. It may be remarked in passing that he has gained much from this experience besides efficient thinking in his arithmetic. It has been a good training for him in reading, for he was required to read with such care and attention in order to grasp the significance of every phrase and even every word that it has given him ability in accurate interpretation that he did not have before.

Of course, reading of this sort could be carried too far—so far that it would arrest the child's freedom in his reading in non-mathematical subjects. But every individual in his daily life needs, at least occasionally, to read selections where the minutest detail must be appreciated with mathematical exact-

ness. How can this ability be gained more effectively than in the accurate reading of arithmetical problems? The writer feels that a teacher should require children from the third grade on to read and interpret problems every day, the aim being to have them acquire a habit of determining precisely what is stated in any given problem.

Verbal study of weights and measures as an example

Let us look at the results of mere verbal teaching in other phases of arithmetical work. I have been observing in a certain schoolroom in which the teacher has been endeavoring to teach weights and measures to children who have had experience outside with few if any of the units which they have been studying in the school. And how are they studying these units? The teacher had the pupils learn by heart the table of linear measure, as an instance. So far as one could tell, these children had not handled a foot ruler. They certainly had only a dim idea of what a yard measure was; and a rod and a mile might mean the same thing to them. But they had said over and over again that "twelve inches make a foot", "three feet make a yard", "five and a half yards make a rod", and "three hundred twenty rods make a mile". The teacher frequently gave problems like these for drill: "How many inches in one-third of a foot?"

"In three yards?" and so on. "How many yards in two rods?" etc. In this work the effort of the children was to remember their tables, and to perform correctly the multiplication processes given by the teacher. They were not actually imaging any of the situations which the teacher presented. She apparently never once thought of asking them to indicate the length of a yard, either on the board, or by extending their hands, or in any other way. It did not occur to her as necessary that she should have the children draw a line an inch long, a foot long, and so on. Her principal aim was to have her pupils remember verbal statements they had learned, and apply these in the special, formal situations which she presented. But these situations really did not involve any knowledge of actual measurement, only a knowledge of words.

The teaching of weights or measures of any sort which does not require pupils to deal with the actual units, so that when they solve a problem they do not think of the result in terms of actual distance, or area, or weight, or size of the measure employed, is defective. Of course, if the pupil has had the actual experience of using units of measure, and constructing higher out of lower units, then he should have experience in solving rapidly problems in which he simply performs the process involved

without attempting to visualize each factor and the results. But care must be taken in the early years to make his arithmetical thinking definite and concrete, so that he can translate correctly, when need be, the results reached in the solution of his problems. As an aid in this work, he should be required to make diagrams to illustrate all problems involving weights and measures, unless such diagrams should be too complex, which would rarely be the case. In estimating areas, for instance, the pupil should at the outset always make his diagram according to scale. In finding cubical contents this can be done. Children in the third and fourth grades can easily make drawings illustrating the ratio and size of the different units in dry and liquid measure. When a pupil is required to do this work he gains a comprehension of the meaning of his processes which he can never do if he simply learns tables, and then tries to apply them to situations in which he does not have actually to construct anything.

Clear thinking and useful problems in arithmetic

No teacher of arithmetic could fail to be interested in reviewing the changes which have been made in text-books on this subject during the past twenty-five years. Perhaps the most significant change which has occurred relates to the character of the problems which pupils

have been and are now asked to solve. In the olden-time text-book, problems were all of a certain general type form. Pick up a text-book which was in use twenty-five years ago, and you will not find many problems concerning the actual situations in which a pupil would be placed outside of school. The exercises were much the same in all the text-books of that time—formal, remote problems in buying and selling, for instance. The articles bought and sold, the price of the same, and the conditions under which the transactions were made were more or less exceptional or unreal. They were not such as pupils would actually have to deal with if they should engage in buying and selling most of the articles used in daily life. Again, there were problems involving the application of various tables of measurement, of weight, of money, and the special tables relating to masonry, etc.; but these problems too, as one reads them to-day, seem remote from real life. A pupil might be able to solve the masonry problems given in his book, but be quite helpless when he was presented with an actual masonry problem in the building of his father's house.

The writer has been able to see this principle illustrated in some work done by pupils to-day in schools where the old style text-books are in use, or where teachers set problems of a formal pattern. In one

such school, typical of many others in a state in the Middle West, the teacher sets most of the problems to be solved, and not ten per cent. of all those she gives her pupils have any connection with their needs outside of school. She is teaching in a prosperous farming community, and she could utilize a great many problems relating to agriculture, to the mechanics of the farm, to the cost of the production of crops, their harvesting, storage, transportation, etc.; but it has not occurred to her that such problems could be or ought to be used in the arithmetic class. In this community the pupils study percentage, taxes, and the like; but the school trustee has to employ an accountant to make out the tax roll for this district. Farmers whose sons solve type problems in cubic measure build their granaries and their cisterns by guesswork. The arithmetic instruction in the school does not reach out vitally into the practical work of the farm.

Making problems relate to the pupil's actual needs and experience

In a teachers' meeting held recently in the county in which the woman referred to teaches, the following question was proposed: "Should the problems in arithmetic be drawn from the pupil's daily life, or should they be numerical problems given them for the purpose of drilling on the fundamental operations in the ap-

plication of tables?" It was significant that most of the teachers who attended that meeting had not thought of the possibility or the desirability of drawing problems from the pupils' actual experiences outside of the school. While theoretically they believed that arithmetic should be taught for the purpose of helping the child in his daily needs, still practically they taught it as though it were for the purpose of drilling him in formal processes, without employing these in useful ways in actual life. Of course, pupils who were so trained could not fail to gain something which would be of benefit to them in their practical affairs; but it is equally certain that they could get the benefit of drill, and at the same time learn to solve problems which would greatly illumine the situations in which they were placed outside of school.

The writer knows of some authors who are at work upon arithmetic text-books especially designed for country schools. These authors are drawing all their problems from the operations on the farm, and from interests that are related thereto. For instance, some of the problems relate to the average yield per acre of wheat and other grains throughout the country. This affords an opportunity for excellent drill in long division. At the same time it gives the pupil information which is

of interest to him, and which he can not get effectively in any other way. If he should sit down and learn by heart a table giving the yield per acre of wheat in the different states of the country, it would be a distasteful task for him; but when he works it out arithmetically the results become fixed in his mind, and the information he gets helps to make the process tolerable.

A concrete instance illustrating the vital teaching of arithmetic

The writer has had an interesting experience illustrating the point involved here. A pupil in the seventh grade of a city school had for his lesson one day to determine the yield per acre of wheat in the different states of the country. The total acreage and the total yield in each state were given. At the outset he was angry at such a task. He thought it was simply a problem in long division, which he had already learned to dislike, because up to this particular day his problems had all been of the numerical kind. But on this occasion the boy's father went through the process with him; and as they worked they talked about the results, and commented upon the variation in productivity in the different states. This led to a consideration of why one state produces so much more than another state. The boy worked at this task for about forty minutes, which

was twice as long as he usually applied himself, and he solved all the problems. When he got through he was genuinely interested in his results, and the father asked that other problems of like character be worked out on succeedings evenings, which was done, and with uniform pleasure to the boy.

Now, note that he was profiting in at least two ways. He was receiving valuable drill in one of the fundamental processes in arithmetic, and he was acquiring information which was of interest and of distinct profit to him. The writer thinks this kind of knowledge can be better given in arithmetic than in geography, though, of course, it is in one sense geographical information. This is perhaps a fit place to remark that many of the most useful problems in arithmetic can be drawn from geography, particularly commercial geography.

Useful problems for the city pupil

For pupils who live in the city, there are all sorts of situations which permit of arithmetical treatment, and in which the pupil will be genuinely interested. Take the matter of laying out streets, the selling of lots, the cost of paving, the total length of water-mains in a city, having given the average length of streets and the amount on any one street, the cost of city government, the rate of taxation for various purposes, and so on *ad libitum*. A teacher could easily

accumulate data regarding all these matters in his own city, and have them for his pupils year after year. The gathering of the problems at the outset would involve some labor, but once collected they would be of service without modification for a considerable period. The point is that what is needed in arithmetic is to apply it to the practical situations presented in the pupil's daily life. Most of the necessary drill can be secured through the solution of such problems.

It is not intended to say that problems should all be of this character; but most of them should be. It is cause for rejoicing that the new text-books in arithmetic are eliminating the formal, remote problems, and bringing the study right to the door of the pupil, and making it interpret and illumine his environment. This kind of arithmetic will make a pupil more appreciative of what is going on around him than he would be without it. He can be led to think of the amount of rainfall in his region in precise terms, the amount of energy generated by a ton of coal, the average growth of plants per day, the relative amount of heat energy expended by the sun at different seasons, and so on at any length. If arithmetic could be generally treated in this way, it would become of far greater interest and greater dignity than it has been in the past, and than it now

is in many communities where the traditional attitude toward it is maintained.

The cure for inaccurate thinking in this field

We may look now for a moment at inaccurate thinking in this field. Many of the errors in arithmetic made by pupils after the fourth grade are due to their inability correctly to interpret the relations expressed in problems. When a teacher finds pupils inaccurate in this way it will do no good for her to say, "Now, be more careful next time," or, "If you do not pay closer attention, I will keep you after school", or, "I will put you back in a lower grade", and the like. Pupils who have not formed habits of accuracy can not correct their inaccuracy by simply saying to themselves, "Now, I must not make any errors." It is an easy thing for us to assume that a pupil can on his own initiative eliminate errors from his work, if he only wills so to do; but experience should teach us that no good comes from threatening or exhorting pupils who have developed inaccurate methods of work. The efficient teacher will analyze the situation before her, seeking to discover the cause of a pupil's errors; and then she will set about developing new habits. For after all, inaccuracy is a habit of mind which is the result of a relatively long process of doing a thing in a certain way. This habit can not be broken up in an instant;

it can be corrected only by slowly building up a different sort of habit, which will in time replace the undesirable one.

The evil of inaccuracy in school work

This last point will bear elaboration. Most teachers find that their chief difficulty in the teaching of arithmetic to young children is to get them to be accurate in their work on their own initiative. Indeed, in some schools the only trouble teachers encounter is in respect to the errors which even the brightest children make. Any observing teacher knows that young pupils do not readily detect their own errors; and this is, of course, true of them in other work than in arithmetic. When the novice executes anything, whether it be a process in arithmetic, or spelling a word, or writing a sentence, he is practically unable to go back over the detailed steps, and detect the one that is wrong. It is a trait of the child mind to view things as wholes; and once executed they must be right. This is one reason why many teachers accomplish so little when they give the following direction to their pupils: "Now look over your work, and see that it is correct." It is difficult enough for even an adult to detect errors in what he has done. The very fact that he has solved a problem in a certain way, or constructed a paragraph after a given pattern, is evidence that he thinks it is correct; and

when he goes over it he tends always to see it as correct and not as erroneous. If it is difficult for the adult to restrain the tendency to see as correct what has once been executed, how much more likely is this to be characteristic of young pupils. And how futile it must be to keep urging them to "look over your work to see that it is right."

Self-correction of inaccurate work

And yet we must, to the fullest extent possible, develop in our pupils the ability to review their work and detect errors. They can be made self-helpful in eliminating mistakes from all their work, but especially from their arithmetic, by requiring them always to check every process and "prove" every problem. No solution of a problem should be accepted from a pupil until it has been checked. When a pupil goes back over his own work and discovers his error, this furnishes the greatest precaution against his making the error again. In this way he learns what his tendencies are, and he will be on his guard against them.

Then in this work of checking, pupils receive valuable drill in performing the fundamental operations, and in seeing the relations in a problem in every way they can be viewed. To know how to check a problem is just as valuable as to know how to solve it. Of course, as pupils go on into the fifth or sixth grade, there may be no need for checking when they

are working upon familiar problems; but whenever they attack new processes, it is always well to require them to "prove" their results, and never to submit a problem unless they have assured themselves by a checking test that their work is accurate.

CHAPTER V

TEACHING PUPILS TO THINK—CONCLUDED

We may here glance at the relation which exists between clear thinking and a good memory. An earnest teacher was recently observed instructing what she said was a dull class. The pupils were taking their first lessons in fractions, and they were progressing very, very slowly. Indeed, after twenty-five minutes of struggle and tension, it was not easy to discover that they had learned much, if anything, concerning the topic being taught. The teacher felt discouraged, and her state of mind was expressed in her tone of voice, her features, and even in her bodily attitudes. She was irritated over what she thought was wilful stupidity. She felt her pupils could grasp the simple relations she was trying to teach them, if only they would make an effort so to do. During the entire period she was chiding them, upbraiding them for their lack of application, and charging them with carelessness and indifference. It

Clear thinking and a good memory

was a disagreeable hour, alike for the pupils, for the teacher, and for the visitor.

One of the phrases which the teacher used most freely in the attempt to quicken the mental processes of her pupils was, "I told you that yesterday; why can't you remember it to-day?" This phrase is heard very frequently in the class-room, and it always comes readily from the tongue of almost any teacher. When one has told a pupil a fact, it would seem that he ought to retain it for a day at least. The teacher can easily retain it himself, and the pupil could do so, "if he was only in earnest about the matter". But is this sound psychology? Can a novice remember any fact as readily as one who is already familiar with it? The very question sounds absurd; and yet it is an entirely reasonable one, considering the attitude of most teachers toward a learner who forgets what has been told him. It is likely to seem so simple to the instructor that he can not easily forgive any pupil who fails to retain it when it is presented to him.

A concrete instance of obscure teaching

Let us take a concrete instance. A teacher is endeavoring to lead her pupils to discover what is the result of multiplying one-fourth by one-fifth. They sit on the recitation bench while she talks about multiplying the numerators together for a new numerator, and

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the denominators for a new denominator. When she uses the term "numerator" she does not indicate it explicitly, or have her pupils come to the board and indicate it, simply because it is so familiar to her that she thinks by calling attention to it once or twice in a general way her pupils will grasp it correctly. In the same manner, when she uses the term "denominator" she does not make it entirely clear what "denominator" means. It is so perfectly obvious to herself that she thinks it is a waste of time, and even throwing a sop to stupidity, to keep dwelling on it. The inevitable result is that as she talks to her pupils there is confusion in the minds of most of them; and when the lesson is over, no clear, definite impression has been established. How then can they remember what was developed when the original perception was so obscure?

Attacking the problem in another way

Suppose that instead of merely talking to her pupils about this process, she had caused each one of them to work the whole thing out for himself, and to describe the operation in his own words, based exactly upon what he had done. Suppose she had taken forty splints, we shall say, or similar objects, and had asked her pupils what was meant by taking one-fourth of one-fifth of them. Before this problem could be taken up, the pupils would, of course, have

had experience in finding fractional parts of a unity, or a group of objects. They could now find one-fifth of these forty splints, and then they could easily find one-fourth of this one-fifth. Then readily they could determine what part of forty was the group of two splints, which was gained by taking one-fourth of one-fifth of forty. Next, they could look at the original statement, and note how one-twentieth could be obtained by simply performing the required operations on the figures themselves.

In order to fix the principle the teacher could give problems like these: Find two-fourths of one-fifth of forty; three-fourths of one-fifth of forty; three-fourths of two-fifths of forty; and so on through a large number of processes. The outcome of this work would be that, through having actually carried a statement out into its concrete results, the pupils would become so impressed with it on account of handling objects in executing the relations stated in the problems, that they would be likely to remember their experience. But when they have no experience, except working with mere figures, nothing can induce them to remember a process except incessant repetition.

Perhaps a better way to proceed than to use splints would be to have each pupil draw a circle, and then perform upon it the operations which his

problem requires; and the teacher can propose many problems involving the same principle, which will tend to fix it securely. These operations can be performed on a line, or better still on a square or oblong, where the pupil can see, and especially where he can *feel through actual execution,* what it means to take a part of a part, or, as we teach it, to multiply a fraction by a fraction. Even with this sort of experience, of course, he may go astray in the first stages of his work, and I, as his teacher, may feel that he is stupid, because the thing seems so familiar to me. But we must not forget that a novice is always likely to make mistakes in dealing with any situation which is new to him. The reason for this is that just exactly the sequence of things necessary to think through any problem accurately has not become established in his mind as a result of constant repetition. Such a sequence has become established in the expert's mind, because he has gone through it so frequently, and he has blazed a trail, as it were, which he can follow without difficulty whenever he starts upon it. But when one is new in any situation, he can not recognize a trail, and he is apt to wander here and there without knowing precisely what is the right direction. The only possible way by which he can discover this right direction is to go over the route frequently with a good guide,

who will make him take account of every possible circumstance and condition, and work his own way as far as possible, and then he will be likely to appreciate the circumstances and conditions when he comes that way again. In other words, he will the better remember what has been taught him.

An illustration from geography

Every one will doubtless agree that it is of vital importance that a pupil should acquire the habit of thinking clearly, and as far as possible profoundly, regarding the world of people and objects with which he must come into relations, either immediately or remotely. The study of geography should develop in pupils this ability to think effectively in respect to certain aspects of the world about them. To illustrate prevalent methods of presenting this subject in the schools, we may glance at the plan pursued in a series of lessons recently observed in a fifth-grade class. On the first day the lesson related to the elevation of the land masses out of the water, and the action of various agents, atmospheric and otherwise, upon rock formations, leading to the disintegration of the surface of the rocks. This brought up a discussion of erosion, and the making and movement of detritus. The children in the class averaged about nine years of age. They had had but little previous work in geography. All they had gained was ac-

quired from an elementary text-book, which they had learned memoriter. They were now studying the advanced geography, which treated the subject in a logical, technical way, using terms which many adults even could not readily pronounce, to say nothing about understanding them. The writer, after listening to this recitation, asked several intelligent grown people what *detritus* was, and they all threw up their hands in utter helplessness. There were in this lesson a number of such expressions as *atmospheric agents* and the like, which the majority of the children could not pronounce, even after some instructions by the teacher.

The pupils had been required to "study" the lesson at their seats. When they came to the recitation, it was evident that the majority of them had not assimilated so much as one clear idea from their struggle with the text. The whole thing, content as well as terminology, was quite beyond them, largely, though not wholly, on account of the technical character of the terms used, and the general abstract treatment of the subject. The man who had prepared the geography stated his facts and principles in the briefest way he could, viewing them through his adult experience. His statements were, of course, intelligible to himself, and he naïvely inferred that a child in the fifth grade ought to under-

stand a thing that was so simple and clear to himself, though he had been for at least forty years dealing at first hand with the data upon which his propositions were based. The statements presented were all condensed generalizations of a large body of observations and concrete materials. The teacher of this fifth-grade class commended the text because of its brevity. She thought it could be easily memorized by pupils, and so learned by them for later use, even if much of it was over their heads now.

The lessons for the rest of the week were much like the first one on Monday morning. They dealt with the building of continents, the conformation of the surface of continents, the establishment of drainage systems on the surface of the earth, etc., etc. In every case the author of the text stated his principles without leading pupils to discover anything as a result of their own observations, and to draw inferences from the facts given. There was very little if anything really concrete in the work throughout the week. The pupils' experiments in the world outside of school were not utilized to any extent. There was no modeling of geographic features in this school, nor even questions on the part of the teacher of the text leading children to work out by their own efforts some of the principles which were being learned. To illustrate this latter defect: when the

conception of a *continental divide* was being gained, the teacher simply tried to get the pupils to recite the statements in the text. There was no reference, even remotely, to the physiographic features in the neighborhood, which might have introduced the idea of a watershed and a divide. There was no globe in the school; and while there was a map in the textbook, it was not evident that it had been intelligently consulted in working out this lesson. It is doubtful if it would have been of assistance anyway.

The method in mathematical geography

During the preceding week the pupils had had lessons upon mathematical geography. They had learned statements regarding the revolution of the earth on its axis and in its orbit, the inclination of the earth, meridians of longitude, parallels of latitude, the zones, etc. Three days after the class had finished these lessons, some of the pupils were tested on their knowledge of latitude and longitude. Every pupil manifested a certain amount of confusion as to whether meridians of longitude extended from pole to pole, or girdled the earth parallel to the equator. When asked why it was desirable to learn longitude and latitude, they were quite bewildered. The question was put to them, "What use do people anywhere in the world make of longitude and latitude?" and not a child could tell clearly. Looking

into the faces of those children as they were being tested, one could see that their only reaction upon the question was by way of attempt to remember the statements that they had learned in the book. The question was again put to them, "Is there latitude and longitude in this school yard?" and they were confused. They had apparently never thought of meridians of longitude and parallels of latitude as existing anywhere except on the map in their text-book.

It was represented to the visitor that the class had discovered that the seasons were caused by the movements of the earth in its orbit. The questions above referred to were asked the pupils on the twentieth day of October. They had observed that the days were growing shorter, though it happened to be warm at this time; yet they realized from outdoor experience that the year was dying, and that winter would soon be upon us. They were asked to say why the days were becoming shorter, and they could not explain the fact in any way other than to say that the "sun is going south." One might, offhand, take such a statement as an indication that the pupils understood what they were talking about; but when the matter was followed up, it became perfectly apparent that the children had not gained the true conception of why there is a change in the sea-

sons. It is doubtful whether pupils of this age can gain such a conception anyway, or ought to be required to attempt it; but it is reasonably certain that the methods employed in this class could not develop any adequate idea of the phenomenon in question. The lessons were mostly words devoid of meaningful content.

Teaching facts without binding them together in causal relations

It is of such importance to teach geography so that pupils may get a real and vital knowledge of the earth as the home of man that we may glance at another series of lessons illustrating merely formal methods frequently seen in the school. For a number of months the work in question has comprised mainly learning by name (1) the capitals of all the states of the Union; (2) the five most important cities in each state; (3) the three largest rivers flowing through each state; (4) all the counties in Wisconsin; (5) the fifteen largest cities of the state; and (6) all the cities, towns and villages in the particular county in which this school is situated. The attitude of the pupils toward this task is significant. From beginning to end their aim has been principally to acquire mere names by ceaseless repetition, in the hope of fixing them in a vocal series, so that, for example, when the word Massachusetts would be mentioned it would automatically

call up other words, as Boston, Lowell, Lawrence, Springfield, Worcester, and the names of three rivers. The pupils as a whole do not have any adequate conception of why the particular five cities mentioned have become the leading ones in any state, or why the rivers take the special course they do through the state.

The teacher, in defending her method, maintains that even if her pupils do not at present know anything vital concerning the cities and rivers, the names of which they are memorizing, they will sometime hear facts regarding them, and it will then prove of advantage to the children to have fixed the names firmly in memory. This seems very unsound doctrine. It is formalism at best. It makes teaching in this special subject a dull and wasteful business. If before learning the name of any city except the one in which they live, pupils had been made familiar with the general climatic and physical conditions of the state being studied, the fertility of its soil in different regions, the natural drainage courses, and the occupations of the people in various sections determined by the physical conditions; and if in the light of these facts they had been led to discover about where cities would be likely to develop, then the names learned would have acquired some meaning for them. Each name of a city or

river would have become a symbol to which could be attached a body of real and vital knowledge, which could not fail to interest even children; and this is the only sort of knowledge that will be of service to them in after life. It is probable that pupils who are required to memorize geographical names dissociated from vital content will develop a vicious habit of mind, which will later tend to make them satisfied with names for things, instead of the realities themselves.

A plausible but erroneous principle of teaching

A correspondent, knowing the opinion of the writer on the subject under discussion, wishes to know what valid objections there can be to requiring pupils ten or eleven years of age to learn the largest cities in each of the states of the Union, and the principal countries throughout the world. He says: "Pupils will need some time to know the names of these cities and countries; and why should they not learn them while they have a memory for such things? If they wait until they are seventeen or eighteen years of age, it will be very difficult for them then to learn these details."

This position appears reasonable from one standpoint; but there is a fundamental error implied in it. It is of doubtful value to any person to have memorized the names of cities, if he has not previ-

ously learned some facts about them which will make it worth while to remember them. Moreover, it is psychologically difficult and wasteful to memorize a geographical name dissociated from political or other characteristics of a physiographic setting. Memory depends primarily upon associating things according to temporal, spatial, or natural connections. But a name of an unknown city, as far as the child is concerned, can hardly be connected with anything which will serve as a bond in memory. It must be memorized by constant repetition, so that it will become fixed in a vocal series. This is actually what young pupils do for the most part when they are required to learn the names of a number of cities in each state. First, they give the name of the state, and then recite the cities in a certain order; and they go over this "piece" so often that it gets established in vocal habit after much time and labor.

It seems clear that the proper way to help a pupil to remember any given city is first to have him study the characteristics of the region 'round about, which have led to the establishment of this city. Then he should be made familiar with the industries and other interests and activities of the city which have contributed to its development. It will be of greater value to a pupil to learn in this manner ten cities in America during the first two or three years of study

of geography, than to learn a hundred cities merely by name; and the principle applies to the learning of cities and countries throughout the world. Study of the sort advocated will get pupils into the way of thinking cause and effect in geography, which is of primary importance. The chief danger to be avoided is reliance upon verbal memory.

Geography a good subject for effective teaching

No subject in the curriculum affords a better opportunity for effective teaching than geography. The facts of this study are concrete and definite, and are well adapted to the child mind, if they be presented in the right order and at the proper stage of development. Most of the fundamental conceptions of geography can be gained by young children if the work be done out-of-doors, or at least if constant reference be made to the geographical conditions in the environment, and if assistance be gained from relief maps and globes, lantern views, and the like. But probably in no subject has the adult point of view been so persistently followed in the treatment of the material as in geography; in consequence of which there is, as there has always been, waste in the teaching of the subject. And what is to be chiefly regretted in this ineffective teaching, there are established mental habits which militate against vital work later on in any study. A child

who learns geography as a mass of verbal statements mainly, the most of which he does not comprehend and in which he is not interested, is likely to be injured in all his mental processes. He is apt to acquire a verbal rather than a real and dynamic attitude toward his environment; or in other words, his thinking power will not be properly developed.

Teaching pupils to become self-helpful

It has been the purpose thus far to show that the "power of thought" implies the ability to handle oneself aright in a new situation. This requires that one should have facility in organizing his past experiences in respect to any situation, and in using them as a search-light to illumine dark places in the road ahead. A thinker is always a person who can see his way through problems which differ in some respects from those he has previously encountered and solved. Such problems would be inscrutable to the non-thinking type of individual, because he has got his set in the direction of abandoning any new problem, or going to others for help in solving it. One sees such persons in every walk of life; and they are comparatively helpless and ineffective. So it seems reasonable to say that the chief aim of the teacher in the teaching of all subjects must be to make his pupils *take the initiative* in all they do; to become *self-helpful.* A child can not be made to

think in the concrete situations in actual life, unless he acquires the habit of working his own way through most of the difficulties presented in the class-room.

An illustration of failure to observe the principle of self-activity

The following illustration may indicate the way in which many teachers fail to put into effect the principle of self-activity in teaching. In a certain school a boy in the fourth grade was recently asked to spell the word "sirloin". He rendered it in this way: "sir *lion*". The teacher said, "No, that is not right. You must try once more." The boy again spelled it as he did the first time. The teacher then said: "Now, you must discover your own error. You spell it as though it were 'sir *lion*' (pronouncing it), but it is not 'sir *lion*' but 'sir *loin*' (again pronouncing). You have learned that when you have the sound of *oi* (pronouncing) you must use the letters *o, i.* Now I want you to try the word again. You need not spell *'sir'* since you had that right; simply spell *'loin,'* remembering what I have just told you." With this aid the boy did spell "loin" correctly. But was he self-active, in a true sense, in this experience? Did not the teacher do the essential thing in leading him to correct his mistake? In order that the boy should have been self-helpful in correcting his error, he

should have been required to pronounce the word slowly, so that he might apprehend the sound of each element thereof. If after this experience he should still have been confused in regard to the last syllable, the teacher should have asked him to pronounce it very slowly so as to separate it phonetically, when he could not have failed to discover his error. The teacher should not have called up any special thing she had taught him. By means of skilful questions she should have led him to analyze the situation before him, so that he might apply to it what he had been taught that would help him to solve his problem. Then he would have been self-helpful in a real sense, because he would have learned how to assist himself on similar occasions in the future.

Making it unnecessary for pupils to use their experiences

During the recitation period in which "sirloin" was being spelled the expression "all right" came up for attention. One pupil spelled it "alright". The teacher said, "You are not correct; try it again." This time the boy said "alwrite". Then followed this comment by the teacher: "When you spelled it the first time the last part, *'right'*, was correct. You should not have changed that, but it was the first part that was wrong. Now try it and spell 'all'." In this way the pupil was led

to spell the word correctly. This case, like the first, shows a lack of skill in training a pupil to be self-helpful. The teacher should not have told him that "right" was correct until he himself had discovered from an analysis of the word and its meaning that it was so. She should have required him to state what the word to be spelled meant, and then what "write" meant; and this would have led him to see that it was wrong to use this latter form. He was, of course, confused by the identity of the sound of the two words, and he was not really thinking of what the word to be spelled denoted. He was proceeding more or less automatically in response to the sound, which is apt to become a habit with pupils who are depending upon others to assist them in straightening out their errors. If in all their work children could be held to an analysis of what they were attempting to do, so that they might bring to bear on the thing in hand their past experience with similar things in respect alike to meaning and to form, they would acquire a tendency to do this on every new occasion, which would be the greatest safeguard against the making of errors. This is really what the principle of self-activity demands; and the teacher who can utilize it to the greatest degree will certainly achieve the highest success in his work.

Home study by pupils and training in self-helpfulness

Most teachers feel they ought to assign tasks to be done by their pupils at home. It is expected that parents will render assistance in the performance of these duties. Indeed, teachers often say it would be impossible for their children to accomplish the necessary work of the school without some help in the home. It is a common thing to hear teachers tell their pupils they should get aid from their fathers and mothers; but at the same time they "must do the work themselves". How many teachers appreciate that a large part of the tasks many pupils do at home with the assistance of their parents is largely mechanical? It is probable that not one parent in fifty knows how to guide his children so that they will take the initiative in their study. Observe a father helping his nine-year-old son in arithmetic, let us say. It is required to solve this simple problem: "A boy in going to school walks for fifteen rods along the street on which he lives. Then he turns to the right on a street that runs at right angles, and walks for twenty-five rods. Then he turns to the left on a street that runs at right angles and walks eighteen rods. He goes to school in the morning and in the afternoon, and comes home for his luncheon. How many rods does he walk in going to and from school each day?"

Of course, there is nothing in this situation which a fifth-grade pupil should not understand readily enough, if he be guided to think through the conditions step by step. But when he first reads the problem he is apt to be confused, because all the conditions surge into his mind at one and the same time, and he has not learned how to pilot his way through them point by point. He is apt to say then, "I do not know what to do." This always means that the total situation is confronting the novice, and he can not start at the beginning, and follow the straight path along to the end. Good teaching would lead him to do just this. A skilful teacher would not *tell* the pupil anything unless it appeared to be necessary. Such a teacher would simply lead the novice to start at the proper point in his thinking, taking up each factor in order, and making drawings so as to help him break up the total situation, writing down distances in the right places, and so on.

The typical parent's method of "helping" his child

But what is the parent apt to do? His most active impulse is to "help" the learner, which, as he thinks, requires him to relieve the child of his difficulties, and this means to enable him to get the answer with the least effort so he can present it to the teacher. The typical parent is interested in having his child arrive at the result most easily, rather

than in having him gain the experience of constructing the situation in his own mind, discovering the causal relations, and thus really solving the problem. So the parent will in most cases *tell* the novice what to do. The parent may even take the pencil and do the figuring, partly because of his eagerness to "help," and partly because of his unwillingness to take the time to cause the pupil to work everything out for himself. It is probable that most of the work done in the home is of this character. Needless to say, it develops vicious habits of mind in pupils, habits which it is difficult for the teacher to overcome.

An illustration of bad methods in home instruction

Let us glance at another instance of a common method of home instruction. A teacher sends a pupil home with instructions to look up in the dictionary the new words in his reading lesson, and to select from the definitions given for any word one which might be substituted for the original. The teacher tells the child he can have his mother "help" him, but that he "must do the work himself". Now when the pupil comes to the mother for assistance, this is the way they attack the situation. The first word the child needs to look up is, we will say (this is an actual case, reported exactly as it happened) *triumphal*. He has not had much experience in

manipulating the dictionary, so he starts at the beginning, and in a blundering way proceeds to go through the whole book until he discovers the letter *T*. What does the mother do in her rôle as assistant? When she sees how inexperienced he is, she says, "Why, you know the letter *T* comes after *S*, and is near the end of the alphabet. You must look toward the end of the dictionary. Find *R; R* comes before *S*. Let me show you how to find it," she adds; and she takes the dictionary and hunts out the letter *T*.

But the novice does not understand how to go forward, even when he has the letter *T;* for he does not know what comes after *T* in the original, and he asks his mother. The mother then spells out the first syllable. She adds: "You know *R* comes toward the end of the alphabet, so you must look way along toward the end of the *T's.*" Then when he finally gets the *Tri,* and wants to know "what comes next," she tells him every letter as he needs it, and she also tells him its relative position in the vocabulary. All the child does is to go through the manual process of turning over the leaves. He has not really thought his way through any of his difficulties. Since he was not led to take the initiative at any point, he will be practically helpless if he is ever placed in another situation like this, because he has

gained little, if anything, from his experience to-day which will make him self-helpful in the days to come.

Some teachers depend altogether upon home assistance in the child's learning how to use the dictionary, which is, by the way, one of the most difficult feats for the novice, and one of the most important, in order that he may avoid waste of time and energy. A distinguished physician recently said that the vision of a good many children is ruined from the use of the dictionary; and when one observes the fruitless, unintelligent wandering through a dictionary of the typical fifth and sixth-grade pupil, he can appreciate that it is a serious tax on his physical and mental constitution.

But let us continue with our typical case. The pupil finally happens upon the word *triumphal,* and it is defined by the use of two or three synonyms, none of which is any more familiar to him than the word he is looking up. What does the typical parent do in such a crisis? He reads the synonyms to his child, and then tells him what one he had better choose to employ as a substitute for the original. He does not lead the novice to get some kind of a hold on the meaning of the unfamiliar words—either the orig-

Teaching to satisfy formal requirements instead of to train a pupil in self-helpfulness

inal or the substitutes. He simply asks him to learn memoriter the substitute agreed upon, so that he may satisfy the requirement of the teacher, whether or not he derives any useful training in the process. As intimated above, the parent is not concerned primarily with the value of the experience of a child in performing a task, but only in assisting him to get at the result, so that when the hour of need comes in the recitation, he can render up what he has memorized, and so satisfy the teacher. Of course, if the teacher would always make the proper test with a pupil to discover whether he had himself taken all the steps leading up to any conclusion, she would quickly discover that he had accepted the result worked out by the parent, and absorbed it by sheer force of memory.

If the lessons in any subject be mastered at home, there is some danger that the work will be done in a mechanical, memoriter fashion. It is the writer's opinion that the chief difficulty with modern teaching, as with teaching in all times probably, is that it *seeks* to get at formal results without regard to the sort of experience which the individual has in reaching the same. It requires patience and supreme skill to teach a learner to take the initiative in all that he is learning—to go ahead of the teacher instead of to follow on; and in this way to be self-active in a

genuine sense. When a teacher says to her pupil, "You must do the work yourself", the latter is apt to think this means learning by heart a process which has been initiated by some one else. If the teacher could in any way make certain that the pupil would receive in his home expert guidance in taking the initiative in his work, then there would be a distinct advantage in having some tasks done there, because the parent could give his child individual attention.

It ought to be possible to impress upon sixth-grade pupils, say, the value of doing most of the original work in any process themselves, seeking assistance only by way of guidance. And there is a fundamental difference between *guiding* and *helping*, as these words are ordinarily interpreted. In guiding an individual, one simply causes him to consider the situation before him so that he may see how he ought to move. In the hands of a skilful guide, the novice is led to consider all the conditions involved in making up his mind what he ought to do, whether in arithmetic, in geography, or in anything else. If he is attacking a new situation, he must be stimulated to call up all he has experienced that bears upon it. His inclination will be not to do this. If he would do it spontaneously, there would be no need for teachers, of course. The tendency of the untrained person in a new situation is to become confused.

Not until he has had long training in using his experience will he gain such momentum that he can, without any guidance whatever, employ it effectively so that he can solve his own problems. A well-trained college graduate ought to be able to do this on all occasions. A well-trained high-school pupil should be able to do it in most of the situations in which he finds himself in the high school. An eighth-grade pupil should be completely self-helpful in respect to much that he studies—practically everything in reading, very much in geography, most of arithmetic, and everything in spelling. The pupil in the first grade is, of course, the least able to use his experience so as to solve new problems. But no matter what point he has reached in his educational development, skilful teaching can lead him to take the initiative in most of what should be taught him.

CHAPTER VI

TEACHING PUPILS TO EXECUTE

In the preceding chapters we were occupied with a discussion of the teaching of subjects dealing with matters of *content,* or perhaps with *ideas,* as distinguished from *forms,* or the *means of expressing thought.* When we were considering the method of presenting content studies to pupils, we were interested wholly in the development of thinking ability; but now that we must give attention to the acquisition of form subjects, we will need to inquire how pupils can most readily and economically gain facility in the use of technique in spelling, in penmanship, in singing, and so on. The attainment of clear thinking should be the end kept in view in teaching history, science, geography, and the like; but automatic execution must be the goal to be aimed at in the teaching of all symbolic or technical subjects. The functions of the content *vs.* the technical subjects are essentially different in human life, and they ought to be taught differently in the schools.

Let us first glance at the teaching of spelling,

which is a good example of a technical subject in which the aim must be to acquire automatic facility in execution. It is probable that no subject in the curriculum is so much discussed in our times as spelling. Newspaper writers are constantly complaining of the inability of graduates of common schools to spell ordinary words correctly. These writers lay emphasis upon spelling as the most essential thing in the school. Of course, bad spelling is easily detected. One can not express himself in writing at all without revealing his ability or the lack of it in this regard; and this is one reason why deficiencies in this subject are so readily detected by laymen.

Spelling as a typical technical subject

Recently a pupil in the fourth grade in a good school, as schools go, brought to his home a list of words to be learned for his spelling lesson. Here is the list: *Honest, farmer, fence, potato, summer, cultivate, generally, harvest, threshing, company.* These words were taken by the teacher from the selection which the pupils had in their reading lesson that morning. It is her practice to have the spelling lessons depend upon the reading, geography, and language lessons. She says that in this way she can select words which the pupils understand; and she is an ardent advocate of the theory that the child

should be able to spell anything he can read. She believes, too, that if a pupil can spell a word he will be able to read it the more readily, so that the spelling will help the reading if the two be developed together.

A practical test

See, now, how one's educational theories may often persist in spite of obvious facts indicating quite contrary principles. The pupil referred to above was asked by his teacher on the day he was given the agricultural spelling list to write a little essay on some experience he had had on the way to or from school. When he proceeded to his task, he declared he could not write anything. "What shall I say?" showed the vacuity of his mind. The teacher had to "develop" the notion that on the way to school he had seen several birds, and she instructed him to tell something about them. So, after much wriggling in his seat, and gazing around to see what his classmates were doing, he finally produced the following: "On the stret (street) to school I saw sevn burds tha (they) were robins I tryed to cetch (catch) them but tha flu (flew) away tha were going sowth (south) for winter."

The teacher had in her career handled a great many "essays" similar to the specimen given, but

still she held to her view that the way to teach a child to spell is to take ten words a day from his reading and other lessons, and cause him to learn them as a list. At the same time, she would not think of asking her pupils to write essays in which they would employ words as difficult to spell as those they were being drilled on in their formal spelling exercises. When I suggested that, instead of asking the children to prepare an essay on some subject they had observed on the way to or from school, she should require them to write a story, using the ten words of the spelling lesson, she objected vigorously. It seemed to her to be unreasonable to ask young pupils to treat such a difficult subject, and her point was well taken, probably, considering what experience the children had had in expressing themselves in this way.

Ability to use words the true test

I have been interested for some years in keeping the spelling lists of a group of children, and noting the relation between these lists and the development of the children's actual spelling ability. I have found, and this may be familiar in principle to all my readers, that pupils may commit to memory lists of words every day, but be quite unable to spell many of them when they need to express themselves. And

the reason for this disparity between learning for mere recitation and learning for use seems clear. It is one thing to learn a word as a separate, isolated entity, and an altogether different thing to master it so it can be employed in its connections in a sentence.

I am now observing a pupil who is required to memorize ten words a day; and he so establishes them in his visual memory that if I begin pronouncing at the bottom of the list, he may start spelling at the top. If I start at the beginning and go down to the fifth word, say, but skip it and go to the sixth or seventh, he will spell off the fifth with perfect confidence. He fixes the words in a mechanical order only. He really does not establish connections between the sound of any given word and its visual form. Much less does he gain such familiarity with words that he can use them as instruments of expression, simply because he does not have experience in using them in this manner. Do you suppose one could learn to use knives by simply learning the names of all the varieties made at Sheffield, and arranged in lists? The only way a pupil can acquire the ability to employ words readily and accurately is to *learn them as he will need to employ them in the practical situations of life.*

Does this mean that it is useless to have spelling lists? Not at all. But it does mean that spelling

Shall we have spelling lists?

is to be gained mainly by writing sentences, rather than by the memorizing of isolated words. Without question the novice should first learn to write his words separately; if he attacks a sentence at the outset he may be overwhelmed by the complexity of it. He should have gained some freedom in handling the individual words of a sentence before he attempts to employ them as a unity; but he must not leave any word he has attempted to learn until he can use it readily in its usual connections.

It is certainly a wasteful, ineffective method to introduce a new list of words every day, so that a large number may be learned in a year. I have tested pupils who have been taught in this way, and I have found that lists learned last week, say, may be almost entirely forgotten this week. They are not *used;* that is the trouble. They may be impressed consciously for an hour or for a day, but they are not fixed for good. They can be made secure only by a generous repetition in a variety of familiar situations. They must be got into the muscles, as it were, and not left merely as unused visual images, which may soon fade into nothingness.

It will hardly be doubted that it is advisable to choose for spelling drill those words and phrases

How shall we choose words for spelling?

that the child is seeing and employing most frequently every day in the regular work of the school. One objection to the old-type spelling-book was that the lists of words offered were compiled without regard to what the pupil was studying in any grade. But even when the spelling lists are made up from the other studies being pursued at the time, there is still danger that if they are learned as lists they will be readily forgotten. It seems to be a law of the human organism, as true of the mind as of the body, that when a member or an idea is not used it is likely to degenerate. If you tie up the arm, the muscles will soon begin to decline. Let a person lie on a bed for two months, and he may discover that he can not walk when he makes the attempt. The muscles necessary for locomotion not being put to service, they become weakened, and begin to go out of business. So in mental function; any image or idea which is not utilized in daily adjustment is likely to be eliminated readily. Nature seems to proceed on the doctrine that what is not necessary for use might better be got rid of as speedily as possible. Any one who has observed the changes taking place in his own memory must have noticed how this law applies to things which he once had at his tongue's

end, but which, on account of not being used, have been forgotten, partially or completely.

Further, when one develops any power of muscle or of mind, he can employ it in the way in which he has acquired it, but not in a different manner. One who has developed his muscles in a blacksmith shop can not use much if any of this special strength in vaulting, say. If one should wish to learn to vault a pole, he ought to get up his muscle by practising on this particular activity, and not on something altogether different therefrom. The same principle is true in respect to mental training. A ticket agent told the writer recently that the moment he enters his office he can answer any question pertaining to the time-table of his railroad, the price of tickets to the remotest cities of the United States, and so on. "But," he continued, "when I am away from the office, and a man asks me a question about the time any train leaves, or the price of a ticket, I can not remember the simplest matters often. I do not understand why when I leave this office I seem to forget all the details of my business." The explanation appears simple enough. We tend to recall anything in connection with the circumstances under which it was originally learned, so that if we change the circumstances, we are apt to forget for the time being.

Now as to spelling. In real life we hardly ever need to spell isolated words. We practically always are required to write them in sentences. But if we have learned them in isolated groups, even though they have been chosen from the regular studies, the chances are we will not be facile in spelling them as they will be used in daily life. Even if we require pupils to learn words in groups, we ought to follow this up with the requirement that they write them in typical sentences in which they will be likely to occur in the emergencies of real life. In this connection it should be noted that a pupil's spelling vocabulary can not keep pace with his reading vocabulary. Reading is a much simpler and more expeditious process than spelling. A pupil ought to progress far more rapidly in mastering words in reading than in spelling. If an attempt be made to keep his spelling up with his work in reading, geography, language, and other subjects, harm will result either to his spelling or to the subjects upon which it is based.

Harmful drill in spelling

It is a rule of pedagogy that through repetition any impression may be permanently fixed. Teachers who acquire their art by learning rules rather than by observing children in the school-room often take this rule literally and seriously. Such teachers commonly assign a

lesson like this: "Write each word in your spelling lesson twenty times." One teacher whose methods the present writer has been studying, applies the rule referred to very vigorously in the matter of spelling. If a pupil misses one word in a lesson she requires him to write it twenty times; if he misses two words he must write each word forty times; three words, sixty times; four words, eighty times, and so on. Recently a child in her room missed seven words in a lesson, and he was required to write each word one hundred and forty times after school. This made a total of nine hundred and eighty words that had to be written without an intermission by this unfortunate pupil. When he completed his task he was quite unstrung. He went to his home and cried over the affair for a long time. He was in such a nervous state that he could not restrain himself. An examination of the papers upon which he had written nine hundred and eighty words showed that during the last quarter of the task he frequently misspelled words. He might write a word correctly twenty-five times, and then the letters would be interchanged, and in some cases letters were omitted and others added. Now, will the reader please notice particularly that after the pupil had written the word correctly twenty-five times, he was likely then to misspell it? What good

did that drill do him? In respect to spelling, pure and simple, was he not injured in the performance of such a task?

When the value of drill ceases

Any observing teacher may notice that after a child has written a word twenty-five times he is likely not to gain any benefit from continuing to write it. What he does after that is apt to be entirely mechanical. Consequently he may not connect what he is writing with the visual or auditory form of the word. The moment he ceases to connect his execution with the way the word *looks* or *sounds,* at that moment the value of drill ceases. It may be that the average child can not write a word profitably more than ten times without a break. Certainly to write it one hundred and forty times as a penalty is a waste at best. It may be remarked in passing that the most serious consequence of such a proceeding is the unwholesome effect upon the nervous system of the victim. It is safe to say that no child in the elementary school can, after the close of school, write nine hundred and eighty words without nervous overstrain. A few experiences of this sort are likely to develop in a pupil marked distaste for the subject of spelling. The principle of repetition is a good one, but like everything else it may be easily

abused; and if carried to excess it may react, and prove of positive disadvantage.

An error in teaching spelling

We may turn now to an interesting psychological problem in teaching spelling. A spelling exercise was recently observed in which the following words, among others, were used, —*surprised, sentence, picture, multiplication, together, signing, frightened,* and *minuend.* The pupils had been given ten minutes or so in which to prepare themselves for the test. In studying their lesson they first looked at the words, then said over the letters, and endeavored to repeat them often enough to fix them in a vocal series. After the test had been given, it was found that a number of the words had been misspelled by a majority of the pupils. *Picture, frightened,* and *multiplication* seemed to be especially difficult, though each word troubled one or more of the pupils.

When the teacher came to correct the errors, she wrote each word on the board, and required the children who had misspelled it to look at the correct form for a moment, and then to attempt to reproduce it accurately. This method was successful in some cases, but it failed altogether in other cases. For instance, one boy of average brightness looked at the word *surprised* for a moment, but when he

came to spell it, he could not put the various letters in their proper places. The teacher was inclined to be severe with him, thinking that if he had really *looked at* it he could have perceived it and reproduced it accurately. During the ten minutes while misspelled words were being corrected, there was much faultfinding on the part of the teacher, because the pupils did not grasp the words at first glance.

Was this teacher skilful in helping pupils to overcome their difficulties in this special field? While some phases of her method were highly commendable, it was seriously defective in one respect. She wrote the word *surprised,* for example, on the board, and asked some pupil who had missed it to look at it and then reproduce it. She knew she could herself see at a glance the entire word correctly as a unit; and why could not the pupils do the same if they earnestly tried, as they should do? As a matter of fact, most of what the teacher thought she *saw* when she looked at the word, was read into it from her previous experience with it. The word was really *in her imagination,* as we say; and she got a suggestion from the form before her, which revived the image established "in her mind's eye." If a foreign word had been put there instead of a word she understood, she would have been confused

in exactly the same way that the pupils were who had not seen *surprised* before.

When a child who can not spell a word simply glances at it as a whole he may feel that he sees it so that he can reproduce each element, but the chances are that he does not see it at all clearly. In such a case the teacher should ask him to pronounce or write or spell orally the first syllable, say, then the second, and so on. If he has trouble with any particular part of a word, it should be separated from the rest, and he should spell it orally and write it until he gains a feeling of familiarity with it. Then it should be learned in its connections with the other parts constituting the word as a unit.

One source of confusion in teaching

The present writer is always distressed when he hears a teacher upbraid a pupil who is trying to master a complex thing, whether a word or anything else, when the latter is confused because he can not apprehend the elements thereof. It is extremely harmful to scold children because they can not perceive these complex units, which seem simple to the teacher who has had a great deal of experience with them. It is a principle of universal application, referred to in a previous chapter, that when a child is dealing with involved objects of any sort, whether words or plants or animals or cities or what-not, and

he does not appreciate the elements, the teacher must lead his attention away from the situation as a whole, and get him clearly to apprehend the particular parts thereof which are the cause of his trouble. Complaining at a pupil who can not grasp the complex thing serves no useful end. Indeed, it tends further to confuse the child, because it arouses painful emotions, and distracts his attention from the thing in hand.

Syllabication in spelling

We are led now to consider the relation of analysis to synthesis in teaching a subject like spelling. We have already noted that one of the chief difficulties with the pupil in learning to spell is due to his practical inability to analyze words into their elements. When the child comes first to school, and for several years thereafter, his acquaintance with words is primarily in their oral form, and words when spoken are in many respects quite different from what they are in their written forms. In the child's use of words, he continues to the greatest possible extent to employ them as unities, so that groups of letters as rendered orally appear to him to function as a single letter. To the child of six years of age, spoken words are indivisible unities, and it is a more or less difficult process for him to learn that they are composed of syllables, and of letters that have independent

values. When he attempts to spell a word familiar to him in his speech, he attacks it on the basis of its oral form as he has been speaking it; and this makes it impossible for him to concentrate his attention upon each element, with the result that he is likely to go astray in his spelling of it.

Let any teacher observe a pupil in the fourth grade, say, who has not been trained to apprehend the syllables in the words he is learning to spell. For experiment, I pronounce to such a pupil the word *granary,* with which he is not familiar so far as spelling is concerned. He pronounces it after me, and it is evident that he is not aware of the three syllables it contains as more or less independent factors in the word. When he pronounces it, the second syllable may not come out distinctly at all; and if he starts to spell the word, he is likely to lose his way. It does not meet the situation for the teacher to analyze the word for the pupil, as many teachers tend to do, because they become impatient when the pupil does not analyze so readily and quickly as could be desired. What the teacher must do is to require the pupil to make the necessary analysis for himself. If he goes astray at any point, the teacher must call him back to the word as a whole, and require him to *pronounce it slowly,* stressing each element if necessary, until the syllables get a certain

distinctness and individuality in his attention. As soon as he acquires the tendency to do this on his own initiative, he will have become possessed of a method which will be of great service to him.

Dangers to be avoided in the analysis of words

There is a special caution which the teacher must observe in this analysis of words. There is a strong tendency to give a false value to individual letters, when the syllables are treated more or less independently. Take, for instance, the word mentioned above, *granary*. As spoken, the second syllable has the value of *u*. Now, if the teacher in her syllabic analysis gives this letter the value of *a*, in order to have the child apprehend the letter for purposes of spelling, there will be danger of her pupil being led into error. That letter *a* never has the value of *a* in this word, and the teacher must lead the pupil to associate it with its actual value in the word in question. The way this can be done best is first to give the letter the value which the pupil ordinarily attaches to it, which will be *a*, we will say. Then he must be led to appreciate that when it is used in the relation found in *granary*, it is always shortened up or softened down in speech. We are here, of course, face to face with the first difficulty in learning to spell. In a great number of our words the letters do not function in combinations accord-

ing to their characteristics in isolation, and this is a source of great confusion to the novice. In helping him out of this difficulty, familiar words must be pronounced and analyzed as suggested, so that he may acquire the feeling that *a* often functions as *u*, as in usable, workable, etc. The principle applies, of course, to the treatment of all the vowels. Even as early as the second grade, pupils can be introduced to this matter of the variability of function of letters in English words.

It must be impressed here that while in the first stages of learning to spell, pupils must be made conscious of elements, still, the ultimate aim must be to lead them quickly beyond this stage so that they can use words as unities quite automatically. We are apt to go astray in respect to both these processes in our work in the class-room. There is danger that at the start we will not make elements stand out clearly enough for a novice, and that later we will not cause them to be fused together into unities, as the pupil becomes familiar with them in actual employment of them in every-day expression. And, of course, this fusing can be secured only through constant use, in which the attention of the pupil is kept mainly upon the thought to be expressed, rather than upon the technique of the words he is employing.

In this connection, attention may be called to the

necessity of the teacher paying attention early to the habits of study of her pupils. To give point to a suggestion to be made here, a concrete instance may be cited. A class in the third grade was recently studying a spelling lesson. The teacher had written ten words on the blackboard, and she had informed the class that after fifteen minutes the words would be erased, and the pupils would be required to write them as she pronounced them. Three or four members of the class took paper and pencil, and wrote the words several times during the study period; but most of the children spent their time looking at the words, and saying them over "in their minds". It was noticed that these latter pupils were easily distracted from their task, showing that their method of study was not favorable to the concentration of attention upon what they had undertaken to do. When it came to the test, those who had written the words succeeded very much better than those who had tried to memorize them by oral drill. This is exactly the result one would expect, since the mere vocal repetition of words could not develop a large degree of ability and accuracy in reproducing them in a graphic way. What is of greater importance, the process of writing the words during the study period stimulated clear visual perception of them,

Evil habits of study must be guarded against

and required rather prolonged attention in order to execute them.

Wasteful and ineffective methods of preparing lessons

Here is another instance of wasteful and ineffective methods of studying a subject like spelling. The revival in spelling which is passing over the country recently overtook a large high school in a western city. The question of the improvement of the spelling of pupils was frequently discussed in teachers' meetings, and it was at last decided to give special attention to the subject, with a view to eliminating the errors which appeared so frequently in all the written work of students. The method of accomplishing this end was to assign lists of one hundred and fifty words at a time to members of the freshman and the sophomore classes. Then an examination was held every alternate Friday afternoon upon these lists. No instruction was given the pupils regarding the way in which they should prepare their words. It was thought to be sufficient simply to assign the lists, and then to warn the pupils that in case of failure in examination they would be conditioned in the subject, and could not be promoted until the condition was removed. Most of the teachers maintained that all that was required in learning these words was for the pupils to "work hard" upon them.

It is significant to note the manner in which a large number of students studied their words. Quite generally they attacked the entire list in the effort to go through it at one sitting. The usual method was to keep the list before them, to look at a word, and then to say it over "under the breath," until they felt they had so fixed it in memory that it could not escape from them. The majority of the students did not spontaneously write the words, and no suggestion was given them that they should pursue this method. The teachers took it for granted that one method was as good as another, only so that the pupils *worked hard* in the effort to master the words. Many words in the lists were comparatively new, and most of them really had to be learned *de novo*. It is true that many of them had been previously memorized in the elementary school; but inasmuch as they had not been used since they were acquired, they were almost, if not entirely, forgotten. Not one of the students observed could remember that he had ever used in his writing in school or outside at least three-fourths of the words given in five lists which had been assigned in the high school. Certain of the pupils thought they had learned all the words in the elementary school, while other pupils could not recall whether they had learned most of them at any time.

Practically all the words seemed more or less familiar, but when the pupils were asked whether they were familiar because they had *read* them or because they had *spelled* them, they could not at first tell. However, upon reflection they usually reached the conclusion that the words appeared familiar because they had *seen* them, and not because they had ever reproduced them in writing. Now, there are at least two serious mistakes which the majority of the pupils made in their effort to acquire these spelling lists. In the first place, they relied upon mastering them orally by reciting them over and over again. This method was wasteful and ineffective, because their tests were always written. Some of the pupils who could spell off the lists orally when their parents pronounced the words, missed a number of them when they came to write them. They said it was because they were excited, or had to write too rapidly, or something else; but the real reason probably was that they were not familiar with them in a *manual* way, so to speak. They could run them off vocally, no matter how rapidly they were pronounced, because they had fixed them in vocal habits; but they could not readily transfer vocal into manual facility.

There was another mistake which these pupils made in their method of study. They tried to learn

the entire list at once, with the result that at least some confusion and fatigue resulted therefrom. In certain cases, pupils made practically no headway after three-quarters of an hour of steady application, because the first words learned were obliterated by later impressions. It is safe to say that one hundred and fifty more or less unfamiliar words can not be recited over at one sitting without waste. In order to comply with the requirements of economy and efficiency, not more than twenty-five words should be learned at one sitting. Then there should be an entire change of occupation for a considerable period. If a student had one day in which to learn one hundred and fifty words, it would be more effective for him to divide them up into six groups, leaving an interval of an hour, say, between the learning of each group, rather than to try to memorize them all at one time. Of course, if the words are already familiar, so that new impressions and habits do not have to be established, then a large number can be acquired without a break.

Auditory familiarity in spelling

While we are speaking of methods of study, we may mention another important matter pertaining to economy and efficiency in spelling. It happened that a number of pupils in the class referred to could not correctly pronounce certain of the words in the spelling list.

As a consequence, when the teacher pronounced them they did not appear familiar, and the pupils went astray on most of them. In certain cases they substituted for a given word an altogether different one, showing they had no conception of the individuality of the particular word in question. This sort of thing is a serious obstacle in learning to spell. If a pupil is required to reproduce a word when it is pronounced, he should, when he studies it, have clearly in consciousness its correct pronunciation, else he can not associate its reproduction with its sound. Teachers need to exercise the greatest care in assigning words to be certain that every pupil is familiar with them, to the extent at least of being able to pronounce them.

Facility in manual execution; a lesson from abroad

In the preceding discussion of spelling, principles were mentioned which apply fully to the teaching of all verbal subjects, in which the aim is to have the pupil acquire facility in employing words and phrases in the graphic form. It will be proper now to ask how he can acquire most expeditiously and effectively the technique of manual execution, as in handwriting. Any teacher of young children would be interested in observing the methods of teaching this subject employed in the elementary schools of Italy. The chief thing aimed

at in these schools is to get the pupil to be neat and accurate in his work from the very beginning—to make a calligrapher out of him in fact. The youngest pupils are not permitted to start with anything as complex as a letter. They are drilled for a long time in simply *making lines.* The greatest care is taken to have every stroke made correctly and esthetically from the very start. The lines are dotted out, and the pupil is expected to trace over them. Then, when in due course he comes to make the letters, all the proportions and space relations are indicated by guide lines and dots, and he is required to *draw* his lines according to the specifications given him.

All the way along in his handwriting the pupil is kept working at his technique in the hope that he may become perfect in it. The Italians exalt technique above everything else. They do *finer, neater,* and more complicated work in technical drawing than may be seen in any of our own schools, as far as the writer's observations go. But they do not use drawing as a *means of expression.* They do not represent anything, except conventional designs, by means of their elaborate technique. One rarely sees pupils in an Italian school expressing content through drawing. Now, a pupil who could reproduce the most intricate formal figures with exquisite

skill might be quite at a loss to know what to do if you should ask him to represent any familiar object or scene.

The psychology of this matter seems perfectly simple. A familiar illustration of the principle is found in one's use of language. When one tries to express himself in a foreign tongue, of which he is not master, he at once sees that his thought becomes formal and disconnected. When one must give focal attention to the *means* of expression, he can not at the same time give proper heed to the *content* to be expressed, and the latter must suffer thereby. So in music; one who is very conscious of technique while executing can produce only formal, and more or less mechanical results. It is apparent how this principle applies to handwriting. A pupil who has been so trained that technique monopolizes his attention can not do vigorous, connected thinking while he is attempting to express himself. One who will study the autograph letters and manuscripts of great men and women, preserved in such collections as those to be seen in the British Museum, and in the Bodleian Library, at Oxford, will see that those who have done really good thinking have rarely if ever been calligraphers. Scarcely any of the specimens one may see in these great collections would be tolerated in an Italian school, or in some schools at

home. The teachers would say that pupils who wrote so "abominably" would "never amount to anything". And it is possible that if Shakespeare or Johnson or George Eliot or Herbert Spencer or hundreds of others like them, were pupils under some of the teachers in our own schools, they would have very hard sledding on account of their handwriting.

The change made in one's style according to the needs of expression

Some studies made by the present writer have shown that a large proportion of the members of a college faculty have changed fundamentally the style of their writing since they left the elementary school. While they were in school great care was taken with them to develop a "fine", "neat" hand; but when they came upon the necessity of expressing themselves readily and effectively they acquired a style suited to their special temperaments. It is probable that every person has certain natural peculiarities which may properly show themselves in his writing, as in his speech or his walk or his gesture. And economy and efficiency require that we should not attempt to make all pupils write just the same hand. What we should demand is *legibility,* with a reasonable amount of neatness; and then let each pupil preserve his individuality in his style. Certain it is that if

we keep at a child incessantly because of defects in his handwriting, we will be likely to make him so conscious of mere technique that he will hardly become able to employ it automatically.

Here is a type of man who will illustrate the principle. When he sits down to write a simple letter to a friend, he goes at the task as though it were a momentous undertaking. He writes slowly, and takes infinite care to have all his lines and spaces just right, mathematically and esthetically. In the course of his writing, one can observe him staring into vacancy several minutes at a time, and frequently he scratches his head to incite his brain cells to greater activity. When he is all through one can see that he has wrought out only a rather stiff and formal product. It is technically good, but on the side of content it is more or less empty and lifeless. This man's writing furnishes a good illustration of a faulty method of teaching—a method which has exalted form above content.

An illustration of exalting technique above content

It may be instructive to give another instance, showing how undue emphasis put upon technique may work harm to a child. J. did not enter the public schools until she was nine years of age. She had been prepared at home so that she could go directly into the fifth grade of a school in an eastern

city. When she began her school life she could write readily in a slant style adapted to her peculiar temperament. Her handwriting had a personal character; it was not precisely like the writing of any one else. It was legible, though it was not beautiful; but she could write automatically for the most part. However, when she entered the fifth grade, her teacher was not satisfied with her penmanship, especially since the vertical style was insisted upon in that school. So it was ordered that J. should change her writing to the vertical form, and the teacher required that she should have a drill period every day in the school, and that she should also be given some special attention at home. Throughout the entire year in the fifth grade, J. tried to acquire this vertical hand. She became self-conscious about her writing, whereas before she entered school she would dash off whatever entered her mind without thinking much about the penmanship. But at the completion of the fifth grade, she had learned to write slowly and painstakingly in the effort to attain the technical perfection which her teacher desired.

J. is now a junior in the high school. Her handwriting is distinguished for its cramped, formal character. She still writes the vertical hand, and writes it rather slowly and laboriously. The teacher

in the fifth grade impressed upon her so profoundly the necessity of taking great care that she can not free herself from the habits established at that time. It is not beyond the fact to say that she is now handicapped on account of her writing. Had she been allowed to develop freely she would probably have acquired a reasonably attractive style. At any rate, penmanship would not have been so great a barrier to her expression as it is now.

The fifth-grade teacher who turned J. on the wrong track greatly overstressed the importance of uniformity in handwriting. She endeavored to make all her children write in the same style. She would set vertical copies, which all her pupils were required to imitate. When their work was passed in each day, she would criticize it mainly from the point of view of technique. She would not accept anything which showed any individual variation from the conventional style in favor in her room. She exhibited in her school-room the writing of those children that was nearest like her own, and that showed the fewest individual characteristics.

It is not unreasonable to say that this kind of teaching exerts a harmful influence upon the development of facility in the use of writing as a means of expression, not only because it exalts form too highly, but also because it suppresses individual-

ity. One can usually distinguish a person by his intonation. It is a part of his make-up. In the same way, one should be able to distinguish individuals by their handwriting. Individuality ought to reveal itself through the hand as well as through the tongue. It would be wrong to make all pupils intone in the same way, or gesticulate in exactly the same manner, or assume the same facial expression in response to any stimulus. So it seems wasteful to try to force a certain style of penmanship on all pupils, regardless of their individual temperaments.

It is not intended to imply that a pupil should have no guidance or instruction in handwriting. Of course, he must be guided in his efforts to write a legible form, especially in the beginning. It will be of help to a child when he is beginning to walk to give him assistance. Also one can do something toward helping him to acquire spoken language, though formal instruction can not accomplish much in this regard. Perhaps more attention should be given to writing at the start than to any of these other activities. But once a pupil gets started in the use of penmanship as a means of expression, then the chief emphasis should be put always upon the thing to be expressed. If his writing is not legible, there will be need for greater care, just as when his speech can not be interpreted he

Instruction in technique

must make an effort to improve it so that he can be understood. It is probable that if we should follow this principle in our criticism of a pupil's handwriting, we would accomplish the most we can for him.

It may be mentioned in this connection that a study of the life of a child outside of school will show that he learns a great deal more or less incidentally while he is active in other directions. This is especially true in respect to his acquiring the *means* of doing things. The child never gives much, if any, conscious attention to walking; he simply keeps in his attention the objects he wishes to attain. Again, the child gives very little conscious attention to the learning of oral language. He endeavors to make himself understood. His mind is always filled with some idea to be conveyed, and the very complicated processes of speech are required with but slight deliberate effort. The child of three or four years is an expert in gesture, in facial expression, and the like, and yet he rarely endeavors consciously to acquire these arts. So one might go on at length to mention activities, skill, and ability which the child acquires without making them a matter of formal study. In all such cases, the end to be attained is the thing in the focus of consciousness, and the means of attaining it are gained on the side, as it were. The principle undoubtedly applies to the

mastery of technique in handwriting and the like, though not to such an extent as in speech, perhaps.

This question of magnifying technique, especially in the early years, brings up other problems associated directly with it. The Italian children are, as a rule, neurotic. They show nervous overstrain even in the first grades of school. There are undoubtedly many reasons for this; but it is probable that a potent cause of nervousness is too great insistence upon finely coördinated work in writing and the like. The problems arising here have been well presented in a letter to the present writer from a teacher in an eastern city. She says: "In an institute last summer, a lecturer stated that children just starting to write ought not to be permitted to make small-sized letters. He said their writing should be three or four times as large as the ordinary writing of a grown person. He thought it would injure the child's writing if he did fine, small work at the outset. But I have found in all my experience that the youngest children like to write as small as possible. I can not remember any child just starting in to write who ever of his own accord wrote in a large way, such as the lecturer advised. If the thoughts presented in the lecture are

Too great emphasis upon technique may lead to nervous overstrain

correct, why is it that very young children always wish to write in such a small hand? I have noticed that they grasp their pencils tightly and bear on."

It is unquestionably true that children five or six years of age, when required to write with a pen or pencil, will tend to make unusually small forms. They will seize the writing instrument tightly between their fingers and "bear on". So far as I have observed, all teachers of young children must constantly work against the child's tendency to write in a cramped way, provided it is thought that this is injurious, either to his nervous system or to the development of efficiency in writing. The letter suggests that it is "natural" for children to write in this manner; and this brings up a difficult problem. It seems reasonable that if children almost universally write as indicated, this style must be "natural."

But we should doubtless look at the matter from another standpoint. It is probable nature never designed that a child of five years should write with a pen or a pencil. At this tender age he has not acquired delicate, precise coördination of his fingers, such as is required in fine writing. Test him in threading a needle, for instance, and you will see that he grasps the thread and the needle in an extremely tense way, much as he grasps his pen when

he tries to write. On the other hand, if you ask him to execute a task requiring crude strength rather than delicate coördination, you will find that he can perform it without undue strain or stress. For instance, he can use a knife in whittling usually with success, because he can grasp it with the whole hand, instead of simply with the tips of the thumb and fingers. Nature probably intended that a child of five or six should apply himself only to tasks that permit of rather coarse, non-precise actions, instead of fine coördination and precise control.

Ask a child of five to perform delicately coördinated movements, and he will try to execute them by using crude power rather than precise coördination. When he undertakes a delicate task he appears to say: "Now I must make a great effort to do this." And "great effort" means using muscles for all they are worth. It means "bearing on" or pushing hard or grasping tightly with the fingers, and so on. In the adult's consciousness, a fine task like writing is interpreted to require exact control of the fingers without the use of the biceps, so that there is no undue force exerted. One can not observe in a well-trained adult when he is writing, any muscular tension in the face, in the hands, or even in the fingers which are controlling the pen. There is practically no muscular effort; there is simply very

neat coördination. But now observe a beginner; you will notice tensions all over his body—not only in the fingers that are being used, but in the fingers that are not used, and even in the toes. One who has made no observations along this line will be surprised to note how extensively the muscles throughout the body are made tense when a child of five is just starting to write with a pen, or even with a hard lead-pencil.

Developing the ideas of lightness and rapidity in the place of power and effort

I agree with the lecturer quoted, that young children ought to write a large, free hand; and if we can do so we ought to prevent their making small, cramped letters in the beginning. But how can we accomplish this? When I received the above letter, I began an experiment with a girl of six years of age, who had been having little lessons in writing for three or four weeks. She wrote in the small, cramped way described in the letter. She had learned to write several words, like "hen", "wig", and "pig". When I would ask her to write one of these words, she would grasp her pencil tensely and bend over her paper. Her body would become rigid, her head would go around with her fingers; and she would write slowly and with muscular effort. She illustrated exactly the typical child who

is permitted to follow his own course in a matter of this kind. That is to say, she accentuated effort instead of coördination.

This particular child had used a pencil of very small diameter, which aggravated the tendency to grasp it in a tense way. I substituted for the small, hard pencil one of soft lead and large diameter. Then I asked the child to take the pencil without any tension, simply *holding* it in her fingers. Next, taking her hand in my own, I asked her to swing it around lightly with me on the letter *h.* (We were practising on the word "hen".) I called attention to the light-looking line we had made compared with the heavy-looking one she had been making, and said to her that we wanted to make as light a line as we could. After we had written the letter rapidly and lightly, I asked her to try it herself. Of course, when she felt the full responsibility of the task, her tendency was to grip the pencil, and "bear on" in the execution of the task. By observing her and taking her hand again, and emphasizing the idea of writing quickly and making a light line, it was not long before I was able to impress upon her the idea of rapidity and lightness, so that when I would release her hand she would tend to move rapidly and lightly; though, of course, she would easily slip back into her original practice.

We kept at this for five minutes and then let it go. In the afternoon we had another exercise extending over ten minutes, in which first the letter *h* was written, and then the whole word "hen", in a rapid way, with the idea of making lightness and rapidity prominent. It should be said that the purpose of emphasizing the idea of a light line was to counteract the tendency to make a heavy one. I knew if I could establish the notion of making a very light line, that this would be the best way to release the tensions, and to resist the impulse to apply great muscular power. A child of six can control his muscles in writing if he can only get the idea of doing the thing rapidly and lightly. And if once he can gain the feeling for lightness of line, later on he can make it heavier if this be thought desirable. But what we want to do in the beginning is to give the pupil a set in the direction of making light marks, and running them off swiftly. The last point should be impressed. It is practically certain that if a child works slowly, tensions will develop, and he will "bear on". He will become too conscious of the details of his task, which he will endeavor to execute by giving attention to each element thereof.

CHAPTER VII

TEACHING PUPILS TO EXECUTE—CONCLUDED

An illustration from instruction in music

The writer has for several years been following the method used in the teaching of a girl, now fourteen years of age, to play the piano. She began her lessons at the age of ten, and has been faithfully practising up until her fourteenth year. She had had no experience in playing previous to beginning instruction with her present instructor, who impressed upon her at the outset the notion that the first requirement was to gain facility in the use of the fingers. The teacher insisted from the start that correct habits must be gained in the control of the hand, the fingers, the wrist, the elbow, the arm, and the body as a whole. The novice was not permitted to practise any exercise in the teacher's presence unless she observed all the technical details mentioned. At the end of the first year, the pupil could play only two or three simple airs; and her chief aim in these was to maintain correct bodily positions, and to exhibit the approved sort of technique in execution. It would be

apparent to any observer that she did not feel the spirit of the thing she was executing. She did not play her selections mainly because she enjoyed them, but rather because they gave opportunity to practise on technique. Her own consciousness was concerned more with accuracy in technical execution than with the spirit, life, and color of the music itself. At the end of the first year of instruction, nothing could induce the pupil to take liberties with the mechanics of playing; and at the end of the fourth year, while some freedom has been gained in execution, nevertheless the thing that looms up in consciousness as of chief value is correct technique. At no point in this girl's instruction has she been made clearly to appreciate that the sole reason for observing mechanical rules at all is to enable her to secure the effects which she desires in her musical expression. She does not view her technique as a means to an end, so much as a thing of value in itself and for its own sake.

Execution in singing

Let us now glance at a method of teaching singing in which technique is exalted to the place of chief importance. In a certain eastern city, the supervisor of music not long since issued instructions to the teachers regarding certain details in the teaching of vocal music. First, he complained of the lack of order and self-control

which he found in many of the rooms he visited during the singing periods. He maintained that pupils should be required to sit erect in their seats, and to keep their bodies still. He said that often during a singing exercise the boys especially would tap out the tune with their feet, which he thought was a grievous error; and he urged the teachers to prevent any unnecessary and distracting actions of that sort. He advised his teachers to insist that while singing pupils should always stand erect, with their heels together, the body being kept under perfect control. The head should be kept to the front, the book should be held in the left hand on a level with the chin, and the right hand should hang at the side.

Elementary facts of technique

In the city referred to, the teaching of music is not begun until the second grade. There is some rote singing in the kindergarten, and occasionally a song is sung at opening exercises in the first grade; but little if any importance is attached to this as a means of developing either musical appreciation, or freedom and efficiency in expression. It is thought that musical instruction proper is begun in the second grade, when the children commence to learn elementary facts of technique. They are first required to "sing the scale", which is written on the board before the

children. The teacher executes it, and requires the pupils to follow her imitatively. When she thinks some facility has been gained in "singing" the scale, she introduces the names of the symbols employed in musical notation. These names are defined, and the definitions are learned by heart by the children. It is maintained in this community that no progress can be made in reading music until the symbols as employed in its expression are understood; and by *understanding* is meant mainly the ability to give correct formal definitions.

So this work goes on throughout the second and the third years, attention being given almost entirely to the learning of definitions of musical symbolism, and the execution of elementary technique, the "singing" of scales, and the producing of tones in reaction upon symbols read or dictated. After a time, songs are introduced and are learned through the use of the notation which has been memorized. These songs are not first sung "by ear" and then by note; but in the very beginning pupils are required to *read* the song, so to speak, through the symbolism which they have learned. The teacher asks, "What key is this song written in?" "Where is the first note located?" And she adds—"Sing the notes by syllable in the first measure." "Now sing the words instead of the syllables." In this way each

song is learned. The aim throughout is to drill upon technique. The children get their set in the direction of giving heed mainly to the mechanics of singing. The teacher does give some attention to what is called "expression"; but this is again mainly an application of technique which has been memorized. At a particular point in a given song, there may be written a symbol which indicates *accent, stress, liveliness, loudness,* or some other quality; and then the pupils are required to apply what they have learned in interpretation of this symbol. It is exactly such a method in principle as was followed some years ago in teaching a pupil to read. To observe punctuation in reading, pupils were required to stop for one count at a comma, two counts at a semicolon, three counts at a colon, and four counts at a period. Under such instruction, a novice in reading always attempted to apply his rules instead of to give natural expression to the thought which was understood and felt, and which ought naturally to be expressed in a given way.

Development of an appreciation of rhythm

It is a simple matter of psychology that in its fundamental character rhythm concerns muscular action rather than mere auditory appreciation. Indeed it would be impossible to have auditory appreciation without some motor response. It is doubtful if the

ear alone could ascribe a rhythmical character to sounds. It is only as the organism, or some member thereof, adjusts itself to the sounds in a regular way that a rhythmical is distinguished from an unrhythmical series. At any rate, the novice can not comprehend any complex rhythm in song or musical instrument by simply *listening* to it. He must first *act it out.* Nature seeks to encourage him in this, because he will spontaneously tap with his foot or hand in response to rhythm which is more or less unfamiliar to him. Often, of course, people continue throughout life to respond by hand, foot, and body to clearly accented rhythms, such for instance as one finds in the ordinary dance music.

General motor before special vocal execution

What nature has taught the child to do spontaneously, the teacher should do with distinct purpose before a song is sung. By children in the primary grade the song should be clapped out in response to the teacher's singing. If the whole body can be brought into play in reacting in harmony with the song, it will help to establish its rhythm. The more completely hands, head, body, and feet can be attuned to the rhythm in the beginning, the more readily will it be grasped by the ear, and the more easily can it be executed by the voice.

Before an attempt is made to sing a song, it ought

to be hummed through with the sole purpose of marking the rhythm in the voice. To sing words in a rhythmical way is far more difficult for the novice than simply to vocalize in a rhythmical way. In the latter case, consciousness is occupied solely with the marking of rhythm vocally, just as in the beginning the aim is to mark it in clapping, or in tapping with the foot, or in movements of the head. But when words are introduced, there is the complicated process of pronouncing them in rhythmical phrases or patterns. Before the novice undertakes this task, he has spoken his words without regard to the rhythms which must be observed in song. And when he tries to utter them now in these new patterns, he must resist the old habits to speak them straight off without regard to phrasing, except as the thought may require it. Any observer of young people must have noticed that they can often "sing" a scale, using such a syllable as *la,* but when they come to reproduce the words of a song instead of the syllable they are often confused, and unable to perform the task.

The child's interest in action songs

As the novice must first execute rhythm in a motor way, so his appreciation of rhythm in song and in instrumental music is determined largely by his interest in action. The young are fond of songs which sug-

gest action. On the vaudeville stage, which appeals so strongly to the "crowd", the singers are always in movement, which is consonant with the rhythm of their songs. The novice is pleased in part by the song, but more largely perhaps by the rhythmical movement. Unquestionably the chief reason why the young are so passionately fond of the singing in the vaudeville theaters is because of its muscular character, so to speak. A singer who does not accent the rhythm of his song with bodily movement of some kind can not claim the enthusiastic attention of young auditors. When a vaudeville audience disperses, one may observe that a large proportion of the people—the young especially—begin to repeat the songs, and they always reproduce the accompanying rhythmical movements. They rarely sing over the songs which may in themselves be rhythmical, but which have not been presented with appropriate motor accompaniment.

This principle is seen in the songs which children choose in the schools when they are given an opportunity so to do. Rarely will children below the seventh grade show preference for songs which aim to celebrate the beauties of nature, say, in color or in form. The writer has been able to observe a teacher instructing a group of fourth-grade children in singing a song describing the attractions of the pussy-

willow. It was evident that the teacher felt the sentiment of the song; and she expressed her feeling for it in her vocal and facial expressions. One could not doubt that the teacher's singing was genuine. There was an indication of true feeling in it, and it impressed the observer as being natural, pleasing, effective. But the children sang in a mechanical way for the most part. They seemed to observe the formal rules with respect to pulsation, duration, and position; but the essential qualities of vocal music were lacking, except, perhaps, in the case of two or three of the older girls in the group. So far as one could tell, the boys were wholly unaffected by the song; they were apparently performing a task merely because it was required of them.

The explanation of this seemed obvious. The pussy-willow, which meant so much symbolically to the teacher, and which incited her to appropriate expression, did not affect her pupils at all as it affected her. The tendency to assign attributes of tenderness, delicacy, heroism, and the like, to objects in nature unquestionably develops slowly, and is not at all prominent before adolescence. It is only as the individual becomes more or less introspective, and begins to feel the tragedies of life, so that tenderness and grief and heroism and delicacy acquire definite meaning for him, that he can ascribe them to the

objects around him. The child is probably nearer than the adult to the realities of life. He tends to view objects without preconception or sentiment. He regards the pussy-willow, for instance, from the point of view of its construction, and how he can use it, and he does not read into it qualities of courage, aspiration, etc. Doubtless education should utilize every phase of nature which will enable the child to objectify his experiences and sentiments, and then to enjoy them or to admire them as if they actually existed outside of his own consciousness. But we must not move too rapidly in respect to this matter. If the child be asked to simulate feeling before he actually experiences it, his performances will be mechanical and artificial; whereas the expression of the adult in a similar situation might be real and vital.

One reason why singing is often formal and mechanical

Here, then, is seen one reason why much of the singing in the schools impresses one as being artificial and formal. Songs are often chosen for their sentimental value, as viewed by the adult; while the child would, if left to his own choice, select songs that are full of action. Let him sing a song in which he has an opportunity to imitate a bass drum, say, and there will be no difficulty in claiming his interest, and making his expression

genuine. Let him accompany his vocal activity with marching, and he will at once enter into the situation with his whole being; face, voice, and body will reveal his appreciation of it, and the naturalness of his expression.

This instance is typical of the sort of songs that are appropriate for the young, while they are in the stage of development in which motor needs predominate over appreciation. In the course of development, the point will be reached when motor activities will subside, and appreciation will become ascendant. When this period is reached, the individual can then celebrate in song experiences which are mainly appreciative, and which portray sentiment in the way of aspiration, hope, and the delight in what is symbolically beautiful and moral in nature. But all this is suitable only for the adult whose needs give importance to those values. In the high school, the songs should concern nature in its esthetic forms and its symbolism of human qualities, and they should also relate to human life in its aspirations, hopes, trials, triumphs, and so on. Thus there should be a gradual evolution in songs from those requiring motor expression mainly to those requiring ethical, esthetic and moral appreciation.

Nothing has been said thus far of the course which the child needs to pursue in learning to inter-

First steps in teaching a novice to read music

pret musical symbols, so that when he looks upon a page of music the forms suggest to him automatically appropriate tonal qualities and vocal expression. In teaching the novice to read *linguistic* symbols, it is the aim of good teachers now to lead him as speedily as possible to interpret readily *groups* of words which portray an idea. In reading, the sole object is to have the consciousness of the reader filled with meaning rather than with words as mere forms or symbols; and as meaning is not conveyed by isolated words, much less by parts of words, so it is necessary to read by phrases or clauses, or even by sentences as unities. Indeed, some persons seem to have the ability to make the paragraph rather than the separate sentences constituting it the unit in reading. At least they give attention in only a minimal way to separate sentences, but in a maximal way to the paragraph; and this is advisable often, since the unit of thought in much of what the individual reads is actually in the paragraph rather than in any of the smaller linguistic unities.

Economy and efficiency in reading linguistic symbols seems to apply to the reading of musical sym-

The relation between reading linguistic symbols and musical symbols

bols, though this principle is not yet appreciated by a good many teachers,

and apparently not by the majority of musicians. This may account in part for the very different results obtained in the teaching of reading as compared with the teaching of music. Of course, more time and energy are usually devoted to the former. But even in schools where as much time is given to music as to reading, the pupils seem to make greater progress in the latter than in the former. In the teaching of reading to-day, good teachers have abandoned the practice of first memorizing the alphabet, then joining letters together to make syllables, and then combining words into sentences—two-word sentences at first, and later on others more involved. Hardly any teacher in touch with contemporary thought would fail to put emphasis at the outset upon the word or the sentence when introducing a child to reading. In due course, she would lead him to analyze the words into their sound elements to which the appropriate letters would be attached, in order that he might be aided to make out new words for himself; but this analysis would come after, not before the learning of words. So in the teaching of music, the novice ought first to execute a phrase or a song as a unity; and later he should discover how the phrase or song may be written in appropriate symbols. Before ever a word is said about any musical symbol, the pupil should have worked out in his

body and voice the rhythms of easy songs. Also he should have gained facility in the vocal expression of rhythm, just as he should gain facility in the use of language before he learns to read. No one would think of asking a child to learn visual linguistic symbols before he had learned to speak. The visual symbols must relate to language which he has already thoroughly mastered. In the same way, to introduce a child to musical symbols before he has gained some ease in singing seems uneconomical and ineffective. When this is done the result will be that he will learn rules for vocal execution, but he will not master musical symbolism in the true sense, which should be simply suggestion of oral and auditory qualities.

As in linguistic symbols isolated letters have no value, so in vocal music the individual note is practically without significance. But if the novice be led at the outset to execute notes in isolation, giving them distinct individuality, they will come to occupy a more or less independent place in consciousness. This simple law is familiar to all capable teachers of reading. The child who early is made to learn isolated letters tends to acquire a set in the direction of giving them independent value,

We must begin with the largest unities possible without going beyond the pupil's ability to execute readily

with the result that in his linguistic training he is likely to be handicapped in the effective use of words in the gaining of ideas. At the same time, when the pupil is first introduced to reading, he must often deal with separate words, because sentences may be too complex for ready comprehension. But he is not permitted to dwell upon the individual words until they get a prominence which they will tend to keep later on, when they really ought to lose their individuality. In the consciousness of a good reader, ninety-nine out of every one hundred words are simply dimly apprehended elements of some larger linguistic unity.

This principle in its application to the teaching of inging would require that while the pupil might begin with the individual notes and dwell upon them just long enough to get a feeling for their individuality, still he must very speedily come to handle them in musical phrases or sentences. He must not be permitted to get his set on giving attention to separate notes; he must get in the habit of fusing them into larger unities. He must be trained so that when he looks at a musical phrase, it will be interpreted as a unity. It is only when the organic relation of any particular note with other notes in a phrase is appreciated that the musical thought is apprehended.

There is, perhaps, no greater fault in current musical teaching than the failure to develop early in pupils the tendency to interpret and execute in terms of large unities, instead of being confined to mere elements which are without value in themselves. Often pupils in the elementary school, and even in the high school, whose musical training has proceeded according to the analytic method, wherein primary importance is given to the simplest elements, never reach the point where these elements coalesce into unities expressive of true musical ideas.

Reading musical symbols at sight

One who has taught children linguistic reading realizes that he must constantly guard against the tendency of a novice to devote his attention to the smallest unities. Without question, a novice regards it as more difficult to handle a sentence as a whole than the individual words of which it is composed. The very length of the sentence may frighten him. Naturally he will tend to work with what appears to be the easier unit. The teacher then must make use of devices to encourage him to grasp the larger unities in one pulse of attention. She must stimulate him to interpret rapidly. She must give him a limited amount of time in which to grasp a phrase or a clause or a sentence, or even a paragraph. In the very beginning, she will assist the reader to perceive

large unities by swinging her pencil over a phrase or a clause, thus suggesting to the eye that it should be apprehended as a unit. Now, in the teaching of musical symbols there exists the same need to incite the novice to grasp unities as a whole. Singing at sight will assist in this process, just as reading at sight is a stimulus to the novice to push rapidly through linguistic symbols to their meaning. When the novice is given plenty of time, he will be inclined to dawdle over isolated elements. But if he be required to get the meaning of a sentence or a paragraph within a limited period of time, he will strive to go directly thereto, and this will compel him to give heed to significant rather than to mere structurally simple unities. With practice the novice may acquire a set in the direction of attending to meaning, and interpreting symbols more or less automatically. Any method of teaching which will facilitate this process is to be commended, for it will help to accomplish one of the chief ends in the mastery of musical technique—to employ it easily and readily in the largest unities possible.

The value of the simplest musical elements

There are certain differences betwen linguistic and musical elements which should be appreciated by the teacher. The sounds of individual letters in language are without emotional or ideational value to children;

though in certain systems of teaching reading, there has been an attempt made to associate artificially the sound elements with the noises made by animals. But in music every tone has a certain peculiar value. The *la* tone, for instance, has a special value for most if not for all persons. *Do* has a different value; and so each tone produces a characteristic effect upon those who hear it. It results, then, that when these are put into combination the result is sad, gay, cold, cheerful, inspiring, or disheartening, according to the predominance of one or another of these tones. The novice can be easily led to appreciate that any given song is expressive of certain mental states or attitudes or feelings, because of the prominence of particular tones. The instant he looks upon a page of musical symbols expressing a song, its general character should be revealed to him, much as when he looks upon a human face, the lines and all the expressive media suggest the character of the individual, and indicate whether he is habitually joyous, melancholy, generous or the reverse. It should not be necessary for a pupil to "hum through" a tune in order to determine its character. The eye alone, grasping the musical phrases, should reveal the nature of the song in respect to its fundamental, emotional value. Of course, this result can never be attained if the pupil is kept over-long in

dealing with individual notes, laboriously deciphering the songs which he is required to sing.

We may now glance at another phase of our problem. The writer had an opportunity recently to observe a series of lessons being given on the piano. The teacher is an expert in technical execution, and is regarded by his colleagues as one of the best-trained musicians in the country. The pupil is a girl fourteen years of age. She has had two or three years of more or less incidental musical instruction, her attention being given mainly to her work in the elementary and in the high school. She has no intention of becoming a professional musician; her parents simply desire that she should acquire an "ear for music", and that she should be able to play a little, principally "for her own amusement".

While emphasis is put upon the higher unities, the lower ones must not be ignored

During this lesson, the teacher dwelt mainly upon the *meaning* of the selection being studied. He talked about the scenes which came into his mind's eye as he read one after another of the musical passages. Then he would show his pupil how he would express these visual images which he said were very clear in his own mind. Even a novice could understand that this man felt music, and was trying to have his pupil appreciate what most impressed him-

self. He was not thinking about the technique of the thing; he was concerned wholly with its content.

But as a teacher, his musical appreciation served rather as a handicap than as a help to him. The musical symbols and the technical processes in execution had become thoroughly automatic in his case. For him the sole requisite now is to develop the content for musical symbolism. The more truly and at the same time deeply he feels a musical situation, the more effectively will he render it, because the means of expression have become automatic; just as a good reader is unconscious of the letters or the words he sees, or of the vocal movements required to pronounce them; or just as a child who has learned to walk is unconscious of the details of an object he sees, and of the locomotive technicalities required to secure it. As a result of his mastery of technique, this teacher could not readily put himself at the point of view of his pupil, who lacked ability to read the symbols readily or to execute them. As one watched her he saw her trying quickly to make out a musical passage, and then striving to render it on the keyboard. It appeared that her attention and energy were given wholly to these technical processes. And the instructor only increased her difficulties by talking to her constantly about the content, showing how he felt about it, and what

images were awakened in his fancy in different parts of the selection. The effect of all this was really to overpower the novice, and the hour passed without any particular progress having been made. She could not appreciate the content because she was struggling with the technique, and she could not make rapid headway in mastering the latter because of the instructor's failure properly to help her.

An illustration from the teaching of drawing

Let us leave the subject of music at this point, and glance at the teaching of drawing. The writer can remember the time when instruction in drawing throughout the country was confined mainly to the reproduction of outline copies of conventional objects in copy-books. The aim in this instruction was to have pupils reproduce formal copies with technical accuracy. It was evidently thought by many teachers in an earlier day that experience in this work would develop ability to represent actual objects readily and accurately. It is worthy of special remark, however, that these teachers rarely if ever made actual tests with pupils to determine whether as a matter of fact they acquired the ability to portray real objects as a result of their drill in reproducing outlines. The writer recently asked a teacher whose pupils had often drawn dogs in outline, if she would have them represent a particular dog which

had come to the school that day with one of the children. The teacher permitted the pupils to attempt the task, but she expressed grave doubt whether they could successfully accomplish it, for the reason that they had had no experience whatever in such work. They had been in school for six years on the average, and they had been drawing in copy-books more or less regularly for at least four years

When they came actually to represent the dog, they were quite helpless even to take the initial steps in the process. It was almost as though they had never seen the object, though they had drawn it in outline a great many times in their copy-books. Apparently they could discern no connection whatever between the copy which they had been reproducing, and the living reality which they were now asked to represent.

Reproduction vs. representation

The terms *reproduction* and *representation* denote quite different psychological processes. In the former case, the individual is required merely to execute point by point a copy which is set before him. What he seeks to do is to make his work resemble exactly the original. The requirements in such a case are, on the motor side, facility in execution, and, on the mental side, an appreciation of the direction of lines, and spatial relations. But when an individual must

represent a real object, the process is altogether different from that required in mere reproduction. In the latter case, the factor of the third dimension is eliminated. The copy is presented in a plane; and of course the reproduction must be executed in a plane. Moreover, in simple reproduction the pupil takes account of lines only, and in his own execution he attempts to construct lines exactly like those in his copy. But when he views a real object, he never sees lines, for these are mental constructions which are employed *to suggest the object.* In the real object, if it be at all complex, there is presented a vast number of details which must be overlooked, and only those characters represented which will be sufficient to distinguish the object, and enable the one who views the representation to interpret its personality, as it were, and its meaning.

Thus while in reproduction the process is not one of selection of aspects, but one of mere repetition of whatever is seen, and also while there is no transference from real appearance to suggestion in line and color in actual representation, these are just the essential processes in representation. A representation is in every respect different from the reality it portrays, but still it must suggest the reality. This indicates the psychological process involved in the individual's learning to represent realities. He must dis-

cover what qualities and relations of lines, shades, and colors will suggest real characteristics to one who views his handiwork. A representation is a creation in the sense that it is never a mere photograph of a reality; it is a translation of real appearances into suggestive characters.

The point is that experience in reproduction alone gives little or no training in this process of translating realities into representative forms. It does not enable the individual to discover how he can employ his lines and his colors to portray realities. Moreover, in simple reproduction the eye can easily follow a line point by point until an entire figure is exploited. But in viewing a dog, for instance, the eye of the novice is unable to trace it point by point; but rather the complex thing as a whole tends to dominate his vision and attention, though some one striking trait may be focal in consciousness. But the representation of this trait alone would in no sense be a representation of the object itself. In following a copy there is usually no particular phase of it which arrests the attention, as there is likely to be in respect to the real object. A mere outline is conventional, so that striking individual characteristics are usually eliminated. But in natural objects it is these individual impressive traits that are likely to monopolize attention. This is without doubt the

most effective arrangement for purposes of perception and adjustment to these objects, but not for representing them; and herein is found the fundamental difficulty in drawing, which must determine the method of teaching. Dwelling upon the mere technique of drawing can not develop efficiency in representation. One may be able to execute beautiful lines, but not be able to employ his skill in portraying objects, for the reason that he has acquired his skill as a thing in itself apart from its use in representation. What is needed in the teaching of this subject is to develop skill through actual employment of it in the way in which it will be required to meet the real needs of daily life. That is to say, the pupil should have experience in *drawing*, and not be confined to drill upon the mechanics thereof.

Automatic facility in arithmetic

Finally, we may consider for a moment how the principles concerning the development of automatic facility in execution apply to a study like arithmetic. Arithmetic, more than any other subject, except writing and spelling, perhaps, should be taught with a view to making many of its processes automatic. In the teaching of history there are very few topics that need to be learned so that they will become mechanical. Most of history should appeal to reason and

appreciation, and it should not be reduced to automatic facility. This is equally true of most of what is taught in literature, geography, nature study, geometry, and the like. But the greater part of arithmetic will be of genuine value to the individual only as it can be used without any conscious effort or direction. Again, one who must "think" how he should spell a familiar word has not been well trained in spelling. The same is true of writing; and it is just as true of most of what will be used in arithmetic. However, many teachers regard the latter subject as one appealing to reason, and they teach it with a view to training reason rather than to acquiring facile habits. But a pupil who is left to "reason out" the product of two numbers when they are to be multiplied, or the sum when they are to be added, or the remainder when they are to be subtracted, or the quotient when they are to be divided, is not properly prepared in arithmetic for every-day needs. In the same way, an adult who must "reason out" the application of most of the tables to the practical situations of life has not been well trained.

Take two children who are sent on a shopping errand. They must go to a grocery, purchase certain articles, and pay for them. One calculates automatically the amount to be paid. He does not have to go through a conscious and therefore more or less

laborious process of comparing the numbers involved. He has so often seen certain figures together with their sum or product or quotient or remainder that now the moment he beholds them in any given relation the inevitable result appears instantly in his mind. To illustrate the principle: an adult, when he sees two and two together in the relation of addition, immediately sees four. He does not have to go through the process of building up from two to the amount of two more. He automatically associates 4 with 2 + 2. In the same way, any properly trained adult who sees eight and four in the relation of multiplication instantly thinks of thirty-two. It is not necessary that he should count up four eights to see how many they make in total. But some teachers who endeavor to make these elementary processes automatic with their pupils, never attempt to do the same in dealing with more complicated relations. The second boy mentioned above suffers from this latter kind of training. He must take time to work consciously through all his processes; he must "reason out" everything he does. Which boy is better trained in the use of numbers? What has the second boy gained from his reasoning process that the first boy has missed? The first one jumps over a number of steps which the second must take slowly. There is no more value in taking these short

steps in arithmetical work than there would be in walking. One person might take a six-inch step while another could step three feet, covering all the intermediate points in one stride.

Of course when a pupil first performs any new process it is necessary that he should see the reason why it must be done in a certain way. This is important so that in the future if need be he can work his way through problems somewhat like this, but the solution of which he has not made automatic. However, in all arithmetical processes which will need to be repeated often in practical life, the plan should be to make them so facile that the pupil can execute them without hesitation, or even without consciousness of the detailed steps involved; and this can be accomplished only by causing him to repeat the application of a principle until he gets beyond the point of having to think it through, in the sense that he will not wonder what he should do, and his mind will not run here and there, because it has learned to proceed in a certain definite direction.

Relation of reasoning to automatic facility in arithmetic

Much of what teachers call reasoning in arithmetic is nothing but the mind of the novice wandering into by-paths because he has not learned which path will lead to the goal he wishes to reach. In the affairs of daily life, the expert can go straight to

the mark, while the novice must try this route and that one, because he does not know which is the proper one. There is no advantage in the development of the mind for the novice to keep trying wrong routes, and having to return when he has discovered his errors. Many people are left in some such a condition in respect to many of the adjustments of daily life. They wander here and there because they have not learned how to decide at once which course to pursue, and so they proceed slowly, and are always making errors. The expert in any field, who has made many processes automatic, rarely makes errors, and he gets forward rapidly; while the beginner never knows when he is right, and he is apt to be halting and indecisive in all he does.

Applying principles until their right application becomes "second nature"

In the teaching of arithmetic, it is the common failing of teachers to leave principles hanging in the air, so that every time a pupil has occasion to use them he must try various routes before he happens more or less by accident upon the right one. But the wise teacher, whenever any principle is developed, will have the pupil apply it in so many ways that he will get a secure feeling for the way in which the thing is to be done. It will become "second nature" to him.

This means that he must be presented with a great variety of concrete situations in which any principle is to be applied; and the more skilful the teacher is in making interesting and practical problems involving the application of principles, the greater success she will have in making her teaching secure in the pupil's life. Take, for instance, the process of computing areas. When this principle is being considered, the good teacher will have her pupils determine the areas of so many surfaces in the schoolroom and outside that a habit of proceeding in a certain definite way when area is to be determined will become thoroughly fixed. But if only a few book problems are solved one week this year, say, and then a few more solved next year, there never can be developed automatic facility in handling these problems. The principle applies to the teaching of all processes in arithmetic.

Danger of over-emphasizing analysis

Many teachers think there is some extraordinary value in having pupils "analyze" every problem they solve. Often one sees a pupil who can grasp the relations presented at once, and reach the solution without delay; but when he comes to state what he has done according to the formula insisted upon by the teacher, he may be slow and incompetent. The writer knows a pupil who is marked very low in

his analysis because he stumbles and halts, and can not choose the right terms when he attempts to go through with the form given him by the teacher. He can explain in his own way so that it will be clear to any one; but his mind seems to resist the particular formula which the teacher wants him to use. He can work very rapidly through any problem presented to him, and he is quite accurate; but his teacher thinks the matter of supreme importance is that he should follow her form in explaining what he does. She attaches more importance to his analysis according to the formal pattern in use, than to his being able to reach the right results rapidly and without error.

Analysis has its place when the pupil is beginning to solve anything which brings in new relations or new processes, but it is of value only because it requires him to grasp these relations in the right way. The moment he can do this he ought to abandon his analysis, and cultivate speed and facility. He ought not to be at all conscious of any formula; and if he be kept upon analysis it will simply hinder him in his development. That pupil who can eliminate the greatest amount in his arithmetical work, provided he reaches the right results, is the one who has gained most from his training. What we must strive after in our arithmetical work are accuracy

and speed, with all unnecessary processes eliminated. If a child can regularly solve a problem involving any sort of arithmetical relations he should not be asked to analyze it; the fact that he can solve it is sufficient evidence that he has grasped those relations. Much less should he be required to analyze according to a special form of which the teacher approves. We are coming to appreciate in education that there is no value in doing things in a formal, elaborate way just for the sake of being complete and explicit. We must eliminate every place we can; and in no work is this more essential than in arithmetic.

CHAPTER VIII

TEACHING THE ARTS OF COMMUNICATION

How the child gets at the meaning of words

Observe a child six months old when he is just beginning to make connections between words and the things or experiences they symbolize. If you notice carefully you will see that in the beginning he gets his cue as to meaning from the facial and bodily expression of the one who is speaking, and also from the tone and timbre of the voice. Words at first denote emotional states to the child; and emotions can be deciphered by means of the vocal and bodily expressions of the speaker more easily and accurately than by means of pure symbols. This is probably true in the case of adults, as it certainly is true in respect to the child, and to some animals, as the dog and the horse. But, unlike the dog and the horse, the child, if he develops normally, can associate words as formal, conventional symbols with definite objects and phenomena and abstractions.

The first thing that strikes one as he studies the babe getting at our meanings for verbal symbols is the latter's lack of precise discrimination as to what is denoted by the words we employ. Let us suppose he is looking out of the window, apparently at the sky, and I say, "sky, sky", and I point at the object, look up at it, and try to get him to look where I do. This is the way people usually proceed with the babe; and they do this because they think he will connect the things he *sees* with what he *hears,* and will thus bind together the word and the object designated. This seems to be good logic; but the trouble is with the premises. It is assumed that the child *sees* what the speaker does; and this assumption amounts ordinarily to a stupendous error. The child does not differentiate the sky proper, as I regard it, from everything else within the range of his vision. If there are clouds in view, these are included; if there be smoke floating in the air, this may occupy a more important place in his attention than the ethereal blue I wish him to direct his vision upon. If there be a tree or a house in the picture, the chances are that these will stand out much more distinctly than the sky.

When I ask him next day, "Where is the sky?" and he points to the chimney of the house opposite, I

The chief distinction between the child and the adult in attending to objects or situations

am amazed, since I took so great pains to teach him the sky as distinct from other things. He must be stupid. From the standpoint of the adult's ability to differentiate in attention specific objects or qualities from a general whole, the babe is stupid, for he can not do it. If he could do this he would be mature; for really that is the chief characteristic of maturity as distinguished from immaturity. The principle applies to some extent, of course, to the five- and ten- and fifteen-year-old, as compared with the fully matured adult.

How often one sees a teacher directing a child's attention to a new situation, pointing out some special phase of it which she appreciates, the while expecting the novice to see it as she does. Then the next day, when the learner shows that he is confused, that he did not make the discrimination expected of him, the teacher may be impatient, and she may hold up the unfortunate pupil before the school as a dunce or a goose. The chief error in most of our teaching is that we do not skilfully isolate just the thing we want attended to, and then employ such effective methods that the learner's attention can not go astray. It is a simple psychological law that attention always tends to follow the lines of least

resistance, which are the lines that have previously been followed; so that we have literally to *coerce* it to make new differentiations. I do not mean that we should attempt to coerce it by dermal excitations. Stimuli of this sort will disperse the attention, instead of focus it on a point, which is what we try to do in every possible teaching situation. If one knows how to *attract* (not *drive*) the attention of his pupils to the particular new point he wishes them to learn, he can teach. Otherwise he will be more or less of a failure in the business.

Now, suppose my year-old child has gained the idea of a chimney associated with the word "sky"; how can he be led to correct the error? Certainly not by repeating to-morrow the same thing he did to-day. No; I must get him to indicate his notion of the meaning of the word, and let him go through all the possible notions he might have accidentally formed; and then I must in every way I know how make it clear to him that it is not the chimney, or roof, or clouds, but the particular thing which people have in mind when they use the word. I must get him to *employ the word* or *react upon my use of it,* and he can tell from my expressions when he is correct. I can never be sure what a learner has in the focus of his attention when I am teaching him a word until he *reacts upon it or uses it himself.* This,

I think, is a principle of universal validity in the teaching of language. Mere formal defining of a word may afford the teacher no opportunity to tell just what mental content a novice has for it.

Really, a child begins to learn words effectively only when he commences to *use* them, and notices how people react upon them. A little boy looking at a picture of a donkey and a soldier read underneath, "Going home on his furlough", and he naturally associated "furlough" with this special sort of animal. But the moment he began using it he discovered from the way people took what he said that he must be wrong, and he was in a frame of mind to get at the true meaning. Those persons who live with children who express themselves spontaneously see the principle here in question illustrated constantly. If a child were never required to *use* language so as to produce definite reactions in those who listen to him, I doubt if he would learn the precise meanings of any but the most concrete terms relating to the objects he meets very frequently. Use is at once the test of understanding, and the motive for perfecting the understanding of words.

When true learning begins

The words which the child first learns accurately are, of course, those which relate to the vital ex-

periences of every-day life. These are always concrete. They can be tested by the senses, and they can be clearly distinguished from one another. When he comes to terms that relate to things remote from every-day life, or to those of an abstract nature, or to broad conceptions or large generalizations, he will have trouble. The best he can do in such cases is to make guesses at meanings, and try on the terms to see if they will work as he conceives them. Take a word like "virtue," for instance. It is a long time before the child can get the precise content of this term, if, indeed, it has a certain definite meaning for adults even. Try to define that term yourself; then ask six or eight of your friends to define it. Are there not differences in your notions? This term did not formerly have the meaning which many persons give it to-day; and a hundred years from now it will probably not have the meaning it now has for most people. As the race develops, meanings of terms change constantly; they tend to become more and more general. At first they are always concrete; and this seems to be the same with the child. Abstract meanings must grow slowly; and we must be content with *approximations* to the true meaning of abstract symbols on the part of the child. It is useless to try to get ten-year-old chil-

dren, say, to learn by definition or any other way the precise meanings of general terms when first they meet them.

Acquisition of meanings by the learning of definitions

This leads naturally to a consideration of the acquisition of meanings by the learning of definitions. In going through many programs of educational meetings recently, I found this topic in a large number of them, which is evidence to the effect that teachers have not yet found just what use should be made of the dictionary. Looking up the literature on the subject, one discovers that most writers have urged that the dictionary be systematically employed in the school-room from the fourth grade on. "Teach children early to go to the dictionary for all words they do not understand," is the advice given by several writers. Others say, "Never tell a pupil anything he can find out by consulting the dictionary. He should as soon as possible acquire the habit of learning the definitions of all strange terms." There are those who have little faith in the dictionary for pupils below the seventh or eighth grade, but they are in the minority apparently. The advocates of the dictionary seemingly have reason on their side; for how can a child gain the meaning of an unknown word except by learning its definition? And if he

does memorize what the dictionary gives for any term, he can not fail to comprehend it, according to the views of many teachers evidently.

But the fallacy of this latter argument will be apparent to any one who will take the trouble to examine the definitions which children in the fourth grade, say, learn from the dictionaries in common use. I have made a collection of the dictionaries sold to children in the grades in different sections of the country, and they are much alike in fundamental characteristics, though they differ in size, type, and the like. But most of them follow the same method in defining words. They aim to be brief, for the sake of compactness, and so they give a few synonyms, without concrete examples showing the usage of any word in its ordinary contextual relations. There lies before me a much-used common-school dictionary, which is a good illustration of the principle in question. Opening it at random, I chance first upon this word: "*typical;* having the nature of or constituting a type. Figuratively representative; emblematic; symbolical." Now I stop long enough to search out a sixth-grade boy, and I ask him to learn this definition. When he has "mastered" it, I have him "recite" it. Then I proceed to have him exhibit what sort of an understanding he has of it. I ask him to give me an example of some-

thing that is *figuratively representative;* also something that is *emblematic* or *symbolical.* The result need not be described to any observant teacher. The boy is utterly at sea in respect to these terms; and he is no better off as to the phrase, *having the nature of or constituting a type.* The dictionary gives no illustration of the use of *typical* or of any of the synonyms used to define it; in consequence of which not a ray of light has entered the learner's mind.

Fundamental defects in dictionary definitions

Turning over the pages of this dictionary, I find that practically all of the words are defined according to the method indicated in the instance cited. One could not easily devise a more wasteful and less efficient method. And the smaller the dictionary the more blunders it makes, for it eliminates all concreteness, and leaves only incomprehensible terms, so far as the novice is concerned. The man who made this dictionary had one aim in view,—to "boil down" the definitions so that they could be presented in brief space, and easily learned by the pupil! Think of it; making definitions easy by shortening them! This dictionary maker must have been a mathematician and a financier; he certainly was not a psychologist or a teacher, or he would have known that the more condensed he made his definitions, the greater the likelihood that they

would be meaningless to the learner. If he had understood his business he would have endeavored to define his words mainly by *presenting familiar examples of their uses.* A child who has never seen a horse, say, or heard of one, could not gain an understanding of him by memorizing a definition presenting the general traits of a horse.

The babe gets the meaning of any term by noting all the expressions of those who use it, and by taking account of all the circumstances under which it is used. In this way he comes to *feel* its significance. He could never sit down in a chair, and acquire meanings by learning definitions "by heart." Slowly he comes to see what is denoted by any term used in his presence through observing the relations between it and environing events, objects, or conditions. He could not possibly learn any word if it were abstracted from everything concrete. Nor can a pupil in the high school learn words in any other way than by observing how they are used in a great variety of situations, thus gradually coming to *feel* what they mean *because of their contextual relations.* The contextual relations of words, not formal dictionary definitions, give a pupil his cue to their meanings. The pupil who reads the most will, other things being equal, be the one who will acquire the meaning of words most readily and ac-

curately. Conversely, one who reads little can not acquire a wide range of meanings, no matter how much he studies the dictionary. He would get on best, however, if he should study some of the large dictionaries which go into detail in giving illustrations of the uses of words.

Words must be learned in their contextual relations

So a teacher must rely upon her regular work rather than upon the dictionary in helping pupils to get the meaning of words. Of course, as the pupil grows into the higher grades and the high school, he can use the dictionary to better and better advantage; but even here too much faith must not be placed in it. The aim must be always to see how words are used in their usual connections rather than in isolation. Words really have meaning only as they are employed with other words in the expression of thought. We should serve our pupils best if we would have them spend in reading much of the time consumed in hunting up words in the dictionary. We must hold them for the substance of what they have read, and the meaning of special phrases, perhaps, though we need not be too precise with young children. They must first get glimpses before they can see the details in their precise relations. In the past, we have been anxious to have children learn formal definitions for all new

words met in their reading. It is better that the significance of many words should be *felt* only. If one tries to give definitions for some words he really understands fairly well he will be formal merely, and fail to present the really vital elements.

The writer has observed the work of a teacher who is a dictionary "fiend". She requires her sixth-grade pupils to write out ten words each day, giving all the diacritical markings, and the formal dictionary definitions. It consumes much time and energy to do this work, and the results are of very doubtful value. Testing the pupils, one finds that all they do is largely mechanical. They merely copy the definitions, and often they can not even pronounce the terms used to define other terms. How much more profitable it would be if they should devote more of their time to reading within their range of comprehension, and getting at the meanings in this way.

Even when a dictionary makes an effort to be "simple" in its condensed definitions, it is likely to be ineffective, or to lead the learner astray. Caroline Le Row gives some samples of definitions written by pupils, which may illustrate the point. Take *bivalve,* for instance; the pupil gains from the dictionary the impression that it has reference to folding doors. Then he applies it as follows: "Our

parlor is a bivalve, because it has folding doors." So with *austere;* the pupil catches the meaning *sour,* and he interprets it as revealed in the phrase, "My mother makes flapjacks of austere milk." Note the following: *Monopoly,* "Our grocer is a monopoly because he keeps on a corner all alone;" *Cursory,* "The boy was cursory when he ran to catch the train;" *Ensued,* "The dog ensued the man to the brook;" *Exhilarated,* "The man was exhilarated to a better place." Examples might be multiplied to any length, showing that the learner can not, as a general principle, gain a correct appreciation from a dictionary definition alone of any term which is strange to him. Hence the rule: Always strive to have the pupil see how words are used in the typical relations in which they are found in sentences.

The social basis for language learning

Let us turn now to a consideration of the teaching of language as a means of communication. Any one who has observed a child during the first three months of his life must have been impressed with his taciturnity. In his instinctive way, he gives expression to his fundamental needs; but he does not manifest a desire to *communicate* with those about him. He stares in a wondering manner at the objects surrounding him, but he makes no effort to get into communion with them. At about the third month,

however, he shows clearly that he is beginning to reciprocate his mother's expressions. She "coos" and "crows" over him, and he makes a feeble effort to return her salutations. Nothing but the presence of the mother, or perhaps the father or brother or sister, will call forth these efforts. It is apparent now that the child is really commencing to feel the desire for communion with people, and this is the very first step in the development of language proper. During the following months all of his linguistic activity has relation to *persons* with whom he desires to communicate. In time he may seek to share his experiences with his dog and all his pets; but the motive in every case for expression is the desire to communicate or share experience.

Language is first, last, and always a *social* instrument. It is the means *par excellence* of sharing experience, which is the most significant impulse in child life. All through the early years, while the child is mastering the technique of linguistic expression, he has as a constant stimulus the need to reveal his thoughts, feelings, and desires. It is from the beginning to the end a severe struggle to acquire a language; and the child would escape it if he were not strongly urged by stern necessity to acquire it for purposes of social intercourse. Children who are brought up alone never master a language as

readily and effectively as those who have vital relations with others, and who, in order to get on happily with people, must become master of the means of expression that will go to the mark most directly.

When the child enters school he still possesses his original interest in language as a means of communication. He will not hesitate to attack any linguistic difficulty, if he realizes that by overcoming it he can express himself more effectively in the ordinary situations in which he may be placed. Outside of school one may often listen to children practising new words and phrases by the hour, because they hear them used by persons in whom they are interested, and with whom they are anxious to communicate more effectively than they otherwise could. On the other hand, I have never heard a child endeavoring to master the expressions of a person in whom he has no interest. Observe children in groups who are using language spontaneously, and you will see illustrated the fundamental motive for learning it in any form—*the need of communion with comrades and associates.*

If in the school-room we could always make our pupils feel that by mastering any special forms of expression, oral or written, they could thereby communicate more precisely with the people in whom they are interested, they would attack these forms

with readiness, and master them with comparatively little difficulty. The writer is now observing a group of children who have become enthusiastic over the notion of publishing a "newspaper". Each member of the group must write something every day for the journal. These children will go to any one who will help them, and ask how they should express this or that thought, what words they had best choose for any given expression, and so on. They are just in the attitude in which they can learn to express themselves in writing most economically and effectively. As a matter of fact, these children are making progress every day in linguistic development as a result of their journalistic enterprise, while they are entirely unconscious of any set purpose to learn. If we could devise means in the school-room which would stimulate a desire for expression, such as these children now have, we should be pursuing the natural course in promoting linguistic development.

The motive for acquiring the art of expression

The chief difficulty in linguistic teaching in most schools is that there is no real motive for acquiring new and effective modes of expression. Ask a child to talk for the mere formal purpose of improving his speech, when there is no clear gain, so far as he can see, in communication with his fellows, and he will make little headway. Often the subjects

which are set in written exercises seem to the child remote from his daily needs, and he is constantly in a hostile attitude toward the work. And when a pupil is trying to avoid a task, he is in an attitude which makes learning wasteful and ineffective. The teacher who can in all her linguistic training place her pupils in situations closely resembling those of daily life, and who can, further, make them feel the need of constantly mastering improved means of expression, will be likely to succeed in her efforts, where otherwise she would become discouraged.

During the early years, when the child is following out nature's plan in his linguistic development, he always plays a great deal with his vocalizations. Even when he is alone you will hear him constantly babbling, and running over all his words and expressions in a variety of combinations. It is evidently the plan of nature in this activity that he should practise linguistic gymnastics for the serious needs of later life. Regular set speech will in time grow out of this spontaneous playing with the language. The child who never plays linguistically is not apt to gain an effective mastery of this means of communication. In any home where an effort is made to prevent this linguistic play, the children show the results in lack of ease and facility in the employment of language. The requirements for

effective use of speech, or writing either, in maturity necessitate a great wealth of spontaneity in the early years.

A suggestion for the teacher of language

There is a suggestion here for the teacher of language. The writer has in mind a young schoolmaster who has become possessed of the notion in some way that he should require his pupils to use set, formal phrases in all their expression. He believes that if he should indulge children's love of spontaneity at all, their speech would become corrupted. He insists, when a pupil is called upon to express himself, that he should first be sure of just the formal words he ought to use, and then use these, and no others. When the child has spoken his formal sentence, he must cease talking and be seated. This schoolmaster is very hard on those pupils who rush ahead to express themselves, and then back up to make corrections and try different words and phrases. He aims to exclude from the school-room all expressions, terms and phrases peculiar to the life outside. Every day he gives his pupils examples of "good English", which is always book English, got out of the grammar or rhetoric. He will not tolerate anything else in his school. He attempts to suppress the spontaneous expression of his pupils so that they will employ only "pure diction".

This young man is the victim of an unsound educational philosophy. He maintains that what is "best" should always be placed before children and required of them; and what is "best" is that which the adult regards most highly, or which has become conventionalized in books. However it may be in reference to other matters, it is certainly an error to maintain that formal, stereotyped modes of expression should be required of children in order to make them efficient in expression. In the school-room of this teacher, one rarely hears genuinely effective expression from pupils. They do not express *themselves;* they try to remember stilted phraseology, which they will cast to the winds the moment they get outside the school-room door.

To the teacher of young pupils: encourage children to express their thoughts readily, vividly and forcefully, and make suggestions at the psychological moment regarding more appropriate words, terms and forms than those employed; but *do not unduly inhibit the child in his spontaneity.* It is better to encourage *freedom* and *adventure* in expression, even at the risk of occasional errors and vulgarisms, than to stifle spontaneity by insistence upon formal expression. The children who grow linguistically are those who talk readily and dar-

ingly, even though they trip and fall at times. This is nature's method in all development.

Doubtless some readers are now asking: Shall we tolerate unconventional speech, even slang, in our school-rooms? As a test, let us see; is the expression, "It's up to you", slang? Recently I asked this question of a group of two hundred upper-class students in a university in the Middle West. Something like two-thirds of them voted, on the spur of the moment, that it was not slang, while the others either thought it was, or were undecided about it. I asked those who declared it was a conventional phrase whether they would feel quite at ease in using it anywhere and on all occasions, if it would serve their purpose effectively. The majority of them believed they would have no greater hesitation in any situation in employing this than any other expression in current use. It had become so familiar to them, and it slipped off their tongues so handily, that it did not appear to be in any respect peculiar or exceptional, or not in good repute among respectable persons. They could not understand how it could be offensive to any one who should hear it, or how in using it they would be doing violence to the proprieties of life.

Unconventional language

Some of the students said they were in the habit of using this expression in the give-and-take of conversation with their associates, but they always "cut it out" in the class-room. They thought it was very well adapted to informal and rather intimate intercourse among friends and comrades, but it was not altogether proper in more formal and conventional situations. Why this should be so, they could not explain fully; they simply *felt* the force of it.

It seemed clear that these latter persons were in a transitional stage with regard to the employment of this unconventional phrase, if we may so characterize it here. When they first heard it, they considered it to be slang; but as their ears became more accustomed to it, it began slowly to lose its strange and disreputable character. In due course they ventured shyly to try it on occasionally in their own expressions, when no one was looking, as it were. Seeing that it worked well, and that no tragedy resulted therefrom to themselves or to others, it gradually became established in their informal intercourse as a serviceable and dynamic phrase. But on account of their uncomfortable feeling when they disregard the conventional requirements of speech, they have not yet reached the point where they can employ much of their every-day language in the more impressive situations of life. They change

their speech as they change their clothes, when they attend the president's reception or go to take tea at the woman's club. Other people are less apprehensive about the evil results of taking a little liberty with precedents, in speech as in other matters, so they give rather free rein to their tongues whenever they are incited to communicate on any topic or on any occasion.

What is objectionable in one section may be acceptable in another

If I should ask of a group of men and women in a drawing-room in Brookline, Massachusetts, the question which I put to students in the university above referred to, nine out of ten of them would say the phrase mentioned is slang, and ought not to be used by cultured persons. But if I should put the same question to a drawing-room group in Chicago, or Cincinnati, or Oakland, or Seattle, or Butte, or Ironwood, the majority would say the expression is entirely acceptable, that it is picturesque and effective, and that it ought to be freely employed, even in formal intercourse, when an opening for it occurs in conversation. If again I put the question to a group of business men anywhere west of the Ohio River, practically every one of them will say the expression may be used with propriety on all occasions. Once more, if I should ask the professors at Oxford, England, whether "it's

up to you" is good English, they would probably condemn it as a vulgarism. But if I should go to Eton or Rugby and publish it, the young fellows there would be glad to hear it, and they would seize upon it as a welcome addition to their dynamic vocabulary. As a matter of fact, there is a special lexicon of original terms and expressions published at Eton, so that visitors may be aided in getting some sort of a line on the language used by the boys.

Specimen phrases trying to acquire respectability

I have tested students, as well as laymen of varied interests and training, on other expressions which are regarded by some as slang, and by others as conventional speech. I have received various expressions of opinion regarding the respectability of such words and phrases as the following: "Stunt"; "Dope"; "She's a peach"; "Scratch gravel"; "It cuts no ice"; "He's off his base"; "He went up in the air"; "He's a shark"; "He's a dandy"; "His nose is out of joint"; "He's up against it"; "He's got up on his ear"; "He's barking up the wrong tree"; "He's a tightwad"; "Straight goods"; "Half-baked"; "He's a sore-head"; "At rock-bottom price"; "Wide open with the lid off"; "Pass in your checks"; "I will not take any back talk"; "Don't monkey with the buzz-saw";

"Forget it"; "He didn't do a thing to him"; "He flew off the handle"; "Chew the rag"; "Tenderfoot"; Head him off"; "I have been through the mill"; "He must face the music"; "He can deliver the goods"; "He always eats a square meal"; "He's off his feed"; "He's a lobster"; "I wish you would put me next"; "He has taken to the tall timber"; "Wouldn't that jar you"; "Paint the town red"; "We had a swell time"; "Nothing doing"; and so on *ad libitum*. Many persons say that these phrases are all pungent and pregnant with meaning; while others say they are inelegant, grotesque, or even low and coarse. Among those who take the latter view are some who might be called "cultured"; but there are also those whose range of knowledge and experience is extremely limited, but who affect literary appreciation and ability.

There are some expressions in current use in many sections of the country which seem to be pure slang to every one I have questioned about the matter. For instance, "Fade away" appears to all people as still without the bounds of proper, conventional speech. The same is true of "Cut it out"; "Skiddoo"; "His trolley is off"; "He's pretty well teed up"; "He has a jag on"; "He has bubbles in his dream-box"; "He thinks he is the chief squeeze", or

"the main guy"; "Cough up some chink"; "Adjective jerker"; "You are giving me hot air"; and the like.

While most persons regard the sort of expressions mentioned in the latter group as slang, they often think it legitimate and even becoming to use them on appropriate occasions—in the give-and-take of their linguistic relations with one another. They feel conversation is more sprightly, interesting, and effective when it is pretty well sprinkled with these decidedly unconventional phrases. The very sound of them has a marked emotional value, which is pleasing to persons of an adventurous disposition, and rather eager for a wide range of experience, linguistic and otherwise.

However, such expressions are rather too wild and unsettling for the typical adult, especially when he has reached the sixth age. When one begins to get his set, alike in his muscles, in his brain cells, and in his ideas, his chief desire then is to prevent innovations in everything of vital interest to him—politics, religion, society, dress, and speech, for he can not readily adapt himself to new modes of thinking or acting. Such a person will, of course, resist as vig-

Conservative people resist new styles in speech as in manners or dress

orously as he can any departure from what he is pleased to call "the proprieties of speech". It may be added that some people get their set soon after they leave the teens.

Teachers and ministers are in most communities expected to observe the conventions, and they are likely to feel the necessity of resisting any liberties being taken with the precedents in respect to speech, as to everything else. But teachers and ministers are much less conventional than they were twenty-five years ago, a fact revealed in freedom in dress and conduct, as in speech. So that now in many places one may hear them employ on occasion such expressions as "We'll all chip in"; "He has a screw loose"; "One ought not to be a knocker"; "He was given the cold shoulder"; "He was put in the cooler"; "He made good"; "He got balled up", and so on. Custom has compelled women to be more circumspect than men about their speech, and they tend often to resist any new styles in expression. However, this is not quite the case as it applies to university women students, who conform less willingly and fully to the conventions of life than their sisters out in the world.

From my window I look out across a lake, and there come to my mind a number of expressions

The unconventional speech of to-day may become the conventional speech of to-morrow

originally referring to the phenomena to be observed thereon. In an earlier day these were decidedly unconventional, though they are now regarded as entirely proper. No one thinks it would be bad form to employ under any circumstances such an expression as "he will not be able to weather the storm," when reference is made to a man's contest with moral, intellectual, or business difficulties. So we can with perfect propriety tell a young fellow to "steer clear" of this or that moral danger. We can ask him whether he is "making headway" in his university work, or whether he is likely to "suffer shipwreck" in his undertakings. I can inquire whether he will be "on deck" in the morning; or I can say to the president of the university that I am glad he has decided "to take the helm, and guide the ship safely to port."

Among virile, growing people every vital activity is likely to contribute some dynamic expressions to general speech. It is a simple principle in psychology that a plastic mind often discerns subtle relations between things which apparently have no connection with one another. Especially when intellectual, moral, or abstract matters of any kind are being discussed, a resourceful mind is apt to discover

illustrations in physical situations with which people are generally familiar. An effective speaker will then be constantly making use of conceptions brought over from life on the sea, or on the farm, or in the mountains, or on the crowded streets of the city, or in the forest, and so on, to vivify his description of abstruse situations. In order to use language with marked success, one must be able to call to his service a great variety of expressive terms that appeal to the every-day, stirring experience of individuals. When the minister urges his flock to "hit straight from the shoulder" in dealing with their besetting sins, he is using slang, of course, but he is making his expression go to the mark. Now, take a person so conventionalized, if one could be found in the world, who would decline to use that expression, because it was a vulgarism; what effect would he have on the sinners in the pews in front of him?

Militant experience, combat in real life, has furnished many effective phrases for the description of moral attitudes and situations. One hears it frequently said that a certain man has been "overcome", or "conquered", or "knocked out" by drink. Again it is "nip and tuck" whether a man will succeed in his undertaking; or he will fight his moral enemies "tooth and nail". It is not right for a man to "show

the white feather"; also he ought always to "play fair". It is perfectly proper for a student to "wrestle" with problems, or for men to "cross swords" with one another in debate. I might go on at any length in calling attention to expressions once slang, but now heard on the lips of the most "proper" persons, who have but slight conception of the origin and history of the words and phrases they imitate from "cultured" people.

The attitude of the teacher toward the use of slang

Should those who feel themselves charged with preserving the proprieties, and especially those who are engaged in leading the young along safe paths, countenance the use of "racy" language? Let us agree that highly conventional persons ought not to use any expression that might seem to be slang. They should condemn it, as befits their nature and their interests. On their lips, much of the speech of buoyant youth would seem grotesque. One's language ought to be congruent with the rest of his personality; it would jar on his associates if he should be unconventional in one respect, while a strict conformist in all other ways. But should such persons set standards for those who are of a venturesome disposition, and especially for the young, whom nature has designed to be plastic and original, ever searching after new styles and

effects in every phase of life and conduct? Childhood and youth were invented so that there might be a period in human life during which innovations of every sort could be introduced and tried out. But in carrying out this plan, violence is often done to custom and the proprieties, as viewed by the people who have ceased to be plastic.

In youth the aim is always to be fresh and original. Of course, there is danger in plasticity. For one is as likely to go to the left as to the right when he moves, unless he be guided by some one who knows the safe route. But progress is always secured by taking risks. People who will not take any chances never go forward fast. Now, the best thing one can do for the young is to develop in them *good taste,* so that they will feel what is appropriate to be done in any situation. It surely is possible to establish in a youth a certain sensitiveness to proprieties in speech as in other matters, so that he will be keen to avoid offending people by what is said or done in their presence. In respect, then, to the use of unconventional language, of the sort indicated above, one who might be quite free in its use on a college campus or at his club, might be wary about employing it in a drawing-room or a schoolroom, or any other place where it would seem unrefined. In Butte or Seattle or Chicago he might

realize that he would be regarded as strait-laced and dull, unless his conversation were quite well enlivened with these picturesque phrases, developed out of a vigorous, adventurous, exhilarating life, but not a life of vulgarity by any means.

In America we ought to make contributions to the English language, in respect alike to its vocabulary and to its idioms. Especially ought we in this country to give our speech a flavor characteristic of the peculiar nature of our thought, feeling, and conduct. Often so-called "purists" who seek to prevent any changes whatever in our speech and writing, do not appreciate what a language is or should be. Such people forget, or ignore the fact, that since the days of Chaucer we have gone a long distance in transforming the English language. The terms and phrases of Milton or Shakespeare coming from the tongues of people to-day would be regarded as intolerable; and the forces which have been at work in modifying the language of these masters are far more active in these piping times than they have been heretofore, because life is surging forward at a more tremendous rate. To put a check on linguistic plasticity and inventiveness would be folly, even if it were possible so to do, which it probably is not.

So we must allow youth some linguistic swing, and age, too, if it can enjoy it, and indulge in it without danger to life or limb; but we must make our young people *sensitive to the peculiar demands of their environments,* so that they will adapt themselves thereto, *not offending in speech* any more than they offend in dress or in action, but still showing freshness, originality, force in all their expressions. Again, we will not permit the use of mere unmeaning jargon, or grotesque and offensive terms, which are sometimes affected by persons merely to be different from others, and not because such terms are really dynamic and effective. Genuinely figurative language usually springs from a highly intellectual source; but jargon emanates from a low origin, and denotes rather an absence than a fullness of thought. Hence, we condemn the latter, while we indorse the former when employed in harmony with environing conditions.

Naturalness in expression

Our discussion leads on inevitably to a consideration of the larger aspects of the great problem of training pupils to be effective in expression. The right use of proper language is but one phase, and possibly the least important phase, of this matter, as we must be concerned with it in teaching. One phase of the gen-

eral question is brought out clearly in the following letter from an observing teacher in the eighth grade of a city school. She writes:

"The chief trouble I have with my children is to make them natural when they come to read or speak. On two Friday afternoons of every month we have general exercises, to which parents are invited. I always have some pupils recite selections; but I have about decided to give up this practice, because the pupils are always so awkward and self-conscious. Are children so in all schools, or is there something the matter with my teaching? Is there any way to make pupils seem natural in what they do before others?"

There are probably few teachers of children from the age of six or seven to the age of twenty who have not been distressed over the awkwardness of pupils when they have been required to perform in a public way. I have often asked myself the question, why children who are so spontaneous and unconcerned on the playground seem so embarrassed and confused when they appear before their classmates, and especially before invited guests. Of course, we must recognize that all of us have probably inherited a certain amount of timidity in the

presence of a company of our fellows, when we are called upon to instruct them or to entertain them. Probably the majority of people, even in adult life, are not quite natural when they are required to speak or sing or play in public. One who will observe adults called upon to give a public address or even to speak at an informal meeting of a club will notice that they often show self-consciousness in every expression—in face, body, voice, and gesture. Everything about them is likely to become more or less strained and tense. The consciousness of being before persons who are studying us is apt to get into the muscles and into the nervous system of most of us.

Can anything be done to keep pupils natural? Often one sees quite young children who are not markedly self-conscious when they read or speak before their fellows. Probably self-consciousness can be avoided by the employment of proper methods in the school-room. It has been my experience that in any school where the daily regimen encourages pupils to talk much to their fellows, they are not likely to become embarrassed and awkward when they are placed in more formal situations. On the other hand, if in all their reciting they are required to assume formal attitudes, and to talk in measured, formal sentences, they will hardly assume

ease and naturalness on any occasion. If one asks a child to come forward from his seat, to square away before his classmates, and to recite in a more or less mechanical way sentences which he has learned by heart, he can not gain experience which will keep him natural. One can not maintain naturalness in voice or facial expression unless his whole being assumes an easy, normal attitude. The reason people are self-conscious in any situation is because they do not feel at home in it. Under such circumstances everything is apt to become strained in them; this is really what is meant by awkwardness and embarrassment.

It is questionable whether speaking pieces on Friday afternoon helps much to overcome awkwardness and undue self-consciousness. It may possibly serve to develop these unhappy conditions. If a pupil is frightened every time he renders a selection, stage fright may become the habit of his life. If a teacher observes that a timid pupil does not gain greater confidence and ease as he goes on in his speaking, she might better excuse him altogether than to try to cultivate confidence in him.

The very act of coming forward before a school to render a selection is a formality which tends to awaken feelings of timidity and constraint in many children. How would it do to have pupils speak

single stanzas or paragraphs from their own seats, permitting them to be natural in their positions, though of course not slovenly or indifferent? In this way a number of children might be heard from frequently, and the experience would not be overpowering. With many repetitions of this experience, ease would be likely to be cultivated. The performance would gradually lose its terror for many children, even if they have already become self-conscious and fearful. This may be seen in any schoolroom where pupils recite freely while standing at their own seats. The present writer frequently observes school-rooms in which children seem perfectly natural in speaking to their classmates, because they have experience in it nearly every day they are in school. They are permitted to speak in their own way for the most part, and are not unduly impressed with the necessity of being conventional and formal.

Concerning the teaching of expression

In some of our schools formal lessons are given in the art of expression. Rules are learned, the purpose of which is to enable the pupil to use his voice so as best to express his thought. In these schools, the teachers usually insist upon certain bodily attitudes being assumed by the children when they are reading. The directions commonly given are that the

reader must stand with his heels together, holding his book in his right hand, while his left hand should hang becomingly at his side.

In one school of this sort, observations were recently made upon the way in which the teacher herself read, and to what extent she observed the rules she was teaching. She was very insistent upon her pupils observing these rules; but she broke every one of them herself. She was reading a long poem to her grade, and hardly once during the whole process did she look at her pupils. She kept her eyes fastened on the book, and her whole expression indicated that she did not have her pupils in mind, with a view to impress upon them the thought and feeling contained in the poem. As a result, scarcely any of the pupils followed her entirely through the poem, and perhaps few of them were much influenced by it. It seemed to the observer to be more or less of a failure, mainly because the teacher had not delivered it effectively.

Why is it that so many of us as teachers are ineffective before our classes? The majority of instructors probably find it impossible to speak or to read to a class in a really effective way. At educational conventions most teachers have to read papers upon topics which they should be able to dis-

cuss freely. Often the authors of papers read them through from start to finish in a way which indicates that they do not have in mind persons to be entertained, or enlightened, or aroused to some new line of action.

It is to be feared that the entire system of developing expression in the schools needs vitalizing. Learning rules about good speaking or effective reading may be and probably is worse than useless. The rule-taught speaker or reader is apt to keep his rule in mind, and it may stand as an insuperable barrier between him and his audience. The only principles of expression that seem really to accomplish much are those which are driven into the pupil unconsciously through the response of his fellows to what he says or reads to them. The sole justification for any principle of expression is found in its suitability to make those who listen see clearly and react appropriately. This law should determine how the art of expression should be acquired. The candidate for a public career must from start to finish in his training be aware of persons who will listen to what he says and reads, and who must be helped to understand, to feel, and to enjoy whatever he presents.

The writer is familiar with a school in which there

A typical instance of affectation in expression

are two teachers who illustrate diametrically opposite modes of treating this subject of expression. One teacher has reduced the entire matter down to a rather elaborate system of principles and rules. Every year she receives a new class of pupils, and she complains constantly of their lack of training in expression. So she puts them through their paces, and in this way she develops a certain degree of spectacular skill in handling the body and the voice in reading, and also in reciting. Nevertheless, she really injures the expression of her pupils as a whole. Many of them lose naturalness, force, and efficiency in their speaking and reading in her room. Her régime impresses one as being mechanically perfect, but lacking vitality. The pupils do not speak or read from the point of view of pleasing or influencing those who listen to them, but only with a view to observing the rules of the game. Outside of that room, they would hardly think of employing such high-flown and artificial vocal and bodily effects in their talk. They would be laughed at by their fellows if they did, simply because they would seem stilted, affected, unnatural. The teacher is herself unnatural in her school-room. She could not tell a story to her pupils so that they would be deeply interested in it for its own sake. They might keep

good order, because they would be afraid to be mischievous in her presence, but they would not be greatly influenced by what she might say or read to them. Her voice, her face, her bodily attitudes all seem formal, and unsuited to the highest type of expression, in which one individual seeks to impart to another something which will be of genuine interest to him.

An instance of naturalness in expression

In the second school is a teacher who does not secure such striking dramatic performances from her pupils, and who does not impress casual visitors as forcefully as the first teacher; but she can tell a story to her school, and every one will be wrapped up in it. When she reads to her class, she uses her book more or less incidentally. She really *talks* when she reads, because she looks into the faces of her pupils, and her language seems to be more familiar and natural than that found in the book. She gives her pupils few, if any, rules of expression, which is a source of criticism by her associate across the hall; but her pupils have, in the opinion of the present writer, better expressive ability than the children in the room mentioned above, because they are *natural* and unaffected. This teacher succeeds quite well in making her children feel the presence of their classmates, and this has an irresistible in-

fluence upon a pupil's talking, and also upon his reading. Doubtless more could be done along this line than the teacher in question is able to accomplish; but she is following the right method. After all, the test of effective expression is found in the reaction of those who listen, and not in the skilful execution of a system of free-hand gymnastics, without regard to the persons who are to be influenced thereby.

Waste in learning selections for recitation

In most good schools pupils are required to learn selections for recitation, and it is a matter of a good deal of importance to have this work accomplished in an economical and effective manner. But sometimes it is not done in this way, as the following instance shows. The pupils in the fourth grade of a certain school were required to learn for recitation *The Landing of The Pilgrims*. In assigning the task, the teacher stated simply that each pupil should be able within ten days to recite the selection without error. Nothing was said regarding the character of the selection as a whole, or of any of its parts. It seemed evident that what the teacher desired was that the pupils should fix in memory the several stanzas *verbatim*, whether or not they comprehended what the content of any stanza was.

The writer was much interested to observe how certain of the pupils to whom this task was assigned proceeded to their work. Here is the way one boy, rather above the average in brightness, went at it. He labored through the first stanza:

"The breaking waves dashed high
On a stern and rockbound coast,
And the woods against a stormy sky
Their giant branches tossed."

His aim was to pronounce the words correctly. When he had gone through this stanza once, he went back and read over the first line two or three times. Then he closed his book, and endeavored to repeat it. This he did for a half-dozen or more times, before he finally felt he had any particular line secure. Next he read over the following line, and repeated the process which he adopted in memorizing the first. So he worked his way through the four lines in the first stanza. Then he went back to see if he could say the lines as a whole. He discovered that he could not put them together when he first made the trial; so he ran through the first line, and opened his book to see how the second line began. Then he recited the two lines together until he felt he had acquired them. So he went on down with the other

lines, though after twenty-five minutes he was unable to recite the stanza without any prompting whatever.

He learned only one stanza during the first bout. The book was put aside then until the next day, when more of the selection would be mastered. But when he came to the task the following day, and he was asked to recite the first stanza, he could not do it, unless he was prompted on the first word or two of each line. He had fixed the words in each line in an automatic series, so that once he got started he could go through with some readiness; but he could not couple the lines together in the right way, because the bond of unity between them was not strong. After he had made the attempt to recall the stanza, he was asked if he remembered what it was about, and he apparently had only a very dim conception of its content.

Appreciation of meaning as an aid to memory

When he read it originally he did not stop to picture to himself what it described. He was concerned solely with getting the words established in memory, so he could rattle them off at will. He gave little if any attention apparently to the meaning of each line, or of the stanza as a whole. Consequently, when he could not think of the first word of each series he could not release the combination. Follow-

ing this plan, he could not learn to recite the selection except by incessant repetition, wherein he could make automatic the mere vocal series, so that once set a-going, he would run along a certain route, because he had followed it so often that he had worn a groove from his brain to his tongue, as it were.

One need not hesitate to say that this is an extremely wasteful method of procedure. And it is worse than wasteful. It tends to develop a bad mental habit. An individual who has much experience of this sort is apt to reach the stage where he can deal with words only, and he may lose his feeling for the meanings behind them. His mind gets set according to a verbal pattern, which prevents him from being plastic in regard to realities.

An experiment in memorizing

The writer was able to make an experiment in memorizing by directing this boy in his learning the remaining stanzas of *The Landing of the Pilgrims*. The first step taken was to have him read the selection as a whole, help being given him with the unusual words, so that he would not delay long over them. The purpose in this method was to develop in him a feeling for the situation in its entirety as described in the poem. Then going back, he read each stanza, and was asked to indicate the situations which it de-

picted. He needed some assistance in getting the content of certain of the stanzas and particular lines in the selection; but the poem as a whole was easily within his grasp, when he was guided a little in interpreting it.

After he had gone through in this way with each stanza, indicating his understanding of the scenes described, he was asked next to talk about the situation as a unity, and he was able to do so with pleasing fullness and definiteness. As a result of this exercise, he declared he could see the waves and the coast and the Pilgrims, and the difficulties under which they made their landing, and the conditions of forest and sky when they landed. He also appreciated their trials in dealing with this new and strange world in which they were placed. He was interested in the description of the types of individuals in the party, and of their courage and heroism in the face of tremendous obstacles.

So much for the first day. The next day he was asked at the outset to begin with the first stanza, and to describe the scenes which it depicted. He could readily tell the content of that stanza in his own words. Then he was asked to note how the poet expressed each thought. The first lines seemed to him straight and orderly, containing for the most part the ordinary expressions of daily life. But it

was different with other lines, as in the one, "And the stars heard, and the sea." When asked why the poet did not say, "And the stars and the sea heard," the boy at once saw that it would not sound right. "It would not be poetry to speak in that way." This impressed him with the poetical order in which the simple thought conveyed could be best expressed. Then when he came to recite the line he experienced little difficulty. He had the content, and he also had gained the idea of the poetical form of expression.

Proceeding in this way with the remaining stanzas, the boy got a preliminary acquaintance with each one in a few minutes. Then going back and reciting two or three stanzas as a unit, because they described a situation which could be apprehended as a whole, he could in this way bind them to one another in memory. The thread which held them together in his thought was the progression of events which they narrated, and which was perfectly natural and orderly, such as he is familiar with in his daily experience. Once this matter of progression of ideas is appreciated, the remaining task of getting the details of expression is comparatively easy; but without this thread of connection being grasped, it becomes a process of remembering by main force. The only way this latter sort of memorizing can be accomplished is by establishing a purely automatic

series, in which there is no bond of natural connection, except that any given word may release the word which has followed it through a large number of repetitions.

There is so much that children should become possessed of in the schools to-day that every effort ought to be made to eliminate waste in memory work. It will not take long to impress upon children in the fourth grade that when they are memorizing a poem they must first get the situation described in each stanza, so that they can begin at the beginning and tell the story, running through the stanzas to the end. Next they must see how the poet expresses each thought developed, and thus they can fix the poet's form of expression. A method like this will not only conserve energy and time, but it will also give pupils an appreciation of the content and poetical mode of expression of the poems which they are memorizing.

CHAPTER IX

TENDENCIES OF NOVICES IN TEACHING

THE writer recently sent letters to one hundred high-school principals and superintendents of schools in the Middle West, asking them to give the results of their experience with new teachers, specifying their strong and their weak points as they had occasion to observe them in the practical work of the school-room. The opinions gained in this way were then compared with reports upon the strong and weak points of one thousand teachers made after careful inspection of class-room work by a special committee of a state university.

Some typical defects in teaching

The principals and superintendents declared, with scarcely an exception, that the secondary-school teacher fresh from college commonly falls far short of large success in his teaching, mainly because he has no adequate conception of what a high school ought to accomplish. And when he begins he often lacks genuine sympathy with the kind of work the high school must do. Further, he frequently has but

slight appreciation of what should be the proper relation of his department to other departments in the high school. His ambition usually is to push his subject to the front regardless of its relative importance for secondary-school pupils. Speaking generally, he has given but little serious thought to the question of the values of studies, and consequently he has only a meager notion of how to construct a well-balanced program of studies for the high school. He has been thinking, even up to the moment of beginning his teaching, about mastering his college physics, or Latin, or algebra, and his mind is quite destitute on the subject of the needs as a whole of high-school boys and girls.

Special and technical work too early

Such teachers often strenuously insist upon doing special and technical work before their pupils have gained a general view of a subject. An enthusiast in physics may spend a whole year on such a topic as light; a biologist may decline to teach anything in his department but the frog; a Latinist may endeavor to get the subjunctive mood in all its breadth and depth set right in the minds of the immature classicists under his care. And so it is apt to go through all the studies. The teacher has himself passed beyond the general view of his subject, and he has come to feel the necessity of going deep into

some special problem. He is eager to push toward the frontier, and take a look into the unknown country; and, naturally enough, he feels that what is of chief interest to himself ought to be of chief interest to every one else. Here again it is impressed upon us that most of the tragedies of the class-room arise out of the inability of the teacher to put himself at the point of view of the learner, with the result that the latter may remain quite untouched by his instruction.

"Shooting over the heads" of pupils

Eighty-five of the principals and superintendents consulted mention a third very common defect in high-school teachers especially; they lecture to their pupils in a formal way, and consequently "shoot over their heads." And the lecturer is apt to reason that if he is not followed and appreciated the class is at fault, and so he gives his pupils a good "dressing down" frequently. It is his business to expound the truth, and the pupils' business to absorb it. He does all that can be expected of him when he spreads out wisdom before these callow youths.

Spiritless teaching and the causes therefor

The reports upon one thousand teachers made by university inspectors point out a half-dozen or more common defects, the one mentioned most frequently being *spiritless* teaching. The causes for this are

numerous; but dry, text-book work is at the bottom of most of it. One type of teacher insists upon verbatim rendering of a text, which at best is only partially comprehended by the pupil. Out of one thousand teachers, one hundred and thirteen teach in this lifeless way. The pupils see little or no relation between the parts of the subject they are studying; and, worst of all, what they are trying to assimilate has but slight connection with the real situations of daily life. Such teachers, as far as they have any clear end in view in their work, and some of them probably have none at all, are dominated by the aim of formal discipline—to "develop the mental faculties" of their pupils. The way to accomplish this is to require them to learn a text, and give it back verbatim. This sort of work will, moreover, in the opinion of these teachers, develop habits which will be of great importance in after life—habits of attention, perseverance, long-suffering (although the instructor would not call it by this name), and the capacity for doing disagreeable and uninteresting tasks. It will develop contentment with plodding, and docility in the performance of drudgery; and since life is one long struggle in doing things one hates, a pupil had best get used to it while he is in school.

It seems probable that all novices, and par-

ticularly those who teach in the high school, would be saved some unhappy hours, and would become a more helpful guide to youth, if he could be made to realize that he ought to try to teach his subject so that it will explain in a real and vital way some phase of the pupil's environment, and give him a mastery over it. Elementary teachers have been hearing so much the last decade, or longer, about mere formal teaching, that even a novice in the grades can hardly escape being influenced by the discussion; but this is not quite so true of high-school teachers. A considerable number of the latter fail because they are satisfied with more or less verbal, mechanical, *definition* teaching. This is why things move so slowly in the classes of some of these novices. Pupils are "eager to get out of the class at the close of the hour"; "they seem bored"; their faces "show lack of intelligence and appreciation"; they seem ready to "cut up pranks at every opportunity"; "they make the teacher's life miserable"; "there is a good deal of nagging going on in these class-rooms much of the time." This style of teacher has a hard time himself, and he makes things hard for his pupils. Most unfortunate of all, he is apt to waste their time, and to develop in them a distaste for everything that has to do with school life.

Vital vs. formal teaching

The second fault which the inspectors find most frequently is not entirely different from the one just mentioned; it is *narrowness of view.* Teachers sometimes go into a great deal of minute details, without leading pupils to an appreciation of their bearing upon the large questions involved. Again, pupils are kept immersed in forms, definitions, rules, and fail to grasp the content to which they refer. They do not get into the *spirit* of the subjects they study. This defect is noticed more often in the teaching of English literature and foreign language than elsewhere, though it is seen also in history and other branches. In these subjects, which are so full of human interest, the novice is apt to keep the pupils plodding along on the dusty road, rarely leading them up on the heights where they can get a view of the landscape lying around.

Narrowness of view

Of course, this defect must be due primarily to the teacher's lack of a broad and genuine appreciation of the subjects he essays to teach. He has dined off the husks of knowledge, and knows not the taste of the real grain. He regards a language as a body of verbal forms, being related to one another according to the rules described in rhetoric and grammar; and he looks upon these rules as having final value in themselves. History is for him not so much a

story of human life in times past as it is a glossary of names and tables of dates. Literature for such a teacher is not primarily a portrayal of concrete situations in human life; it is a drill-book in rhetorical and grammatical formulæ. One may find some teachers who have gained a broader view of these things for themselves, but who, when they come to instruct others, abandon it, and give themselves up to rules and forms and dates and names and definitions.

Next in the list of demerits comes *inaccurate knowledge,* which is found most frequently in the **Inaccurate knowledge** teaching of foreign language and history. One sees teachers who make an effort to give instruction in German, but who have got all they know out of a book, and who have not spoken or read it to any extent outside of the schoolroom. They have never had occasion to use the language in a serious way. They have never thought at first hand in it, or interpreted thought presented in it. Consequently most of the subtle peculiarities that really constitute the personality of the language and distinguish it from others have escaped them. Here, as we should expect, teaching is apt to become mechanical and artificial.

One who gets only a teaching knowledge of German or any other foreign language can hardly lead

the young into possession of the same in a really effective way. What has not come into one's own life in any important, vital manner, can never be taught to others economically and dynamically. The teaching relation must always be imperfect unless the teacher seeks to impart to the learner knowledge which he has found of value in his own adjustment to his environments. Any other kind of knowledge will be cold, inert, sterile in the teacher's hands. The human mind is so constructed that it will work effectively in those situations only where lack of such efficiency will bring discomfort. It will not exert itself to be exact or agile where the result of its efforts are indifferent. So if we would develop in our teachers the capacity to do accurate work in any study, we must, in their preparatory training, put them into vital situations, where they will, from hard experience, come to realize the necessity of absolute accuracy; and this principle holds as well in the teaching of their pupils.

Failure to make pupils self-active

The inspectors referred to above frequently report a defect which is regarded as very common and serious by principals and superintendents alike. The reports indicate that many teachers *fail to get any work out of their pupils.* The "teacher is too prominent"; "she does all the talking"; "she manipulates all the

apparatus herself"; "she asks a pupil to solve a problem, and then does it herself"; "she draws all the illustrations", etc. The defect in such work is, of course, that pupils are not reacting upon what is presented to them, and so are not making it their own. Neither elementary nor high-school pupils have had sufficient experience ordinarily to organize what is offered them in the class-room with systems of thought and conduct already established, unless they actually do for themselves the most of what is done in the class. They can not fully comprehend an experiment unless they get together and in working order the apparatus to perform it, for otherwise they can not see how a phenomenon is produced. So to have the pupils sit in their seats day after day, and look on while the teacher performs experiments to illustrate principles, is poor teaching. The ultimate purpose in teaching physics, or any science in the high school or elsewhere, should be, of course, to enable a pupil to interpret the phenomena which occur outside of school. He must be led to see behind the infinite variety of happenings about him great laws and principles which really simplify the world, and in this way he may gain poise, stability, and confidence in the midst of otherwise bewildering phenomena. But this end can not be achieved when the pupil is merely an onlooker in the class-

room or in the laboratory, and not self-active in producing and interpreting events.

Dynamic vs. static attitudes

It is certainly reasonable to say that he alone can be a successful teacher who knows how to produce appropriate reactions right along from those he is instructing. This does not mean that the whole of any class exercise must be devoted to give-and-take between teacher and pupils, when once the latter are in a reactive attitude. The instructor may be able with profit to take the reins in his own hands for a good part of the hour; but the moment the class comes to realize that he is certain to hold the boards for the entire period, so that they can lie back and let him work—at that very moment he ought to cease giving, and get his class into an active attitude.

This can be put down as a primary law of teaching: there can be no effective learning in any class where the pupils are not in a dynamic attitude toward the thing which is being presented. And they can not be dynamic for any considerable length of time at a stretch unless they are self-active in organizing and setting forth in some way—linguistically, laboratorially, representatively, or otherwise—the material which they are endeavoring to assimilate. When a teacher has had a group of pupils for one month, say, a visitor can tell in five

minutes whether or not he has developed in that class the fundamental attitudes essential to effective learning.

Appropriate reaction is the thing

It really is not of so much importance whether a teacher asks a question that can be answered by *yes* or *no,* the *bête noir* of pedagogy, provided his method as a whole will cause his class to react vitally in the appropriation of what is offered. Some of the more widely exploited rules of pedagogy relate to the mere external, artificial, and superficial aspects of teaching. One might ignore every one of these popular and much-lauded rules, and still be a great teacher. Of course, he would be a better teacher if he violated no sensible rules, whether they be of fundamental or only of secondary importance. But no matter how many rules he learns for asking questions and organizing and managing a class, he will be a dead failure if he does not keep his class in a constant dynamic relation toward the subject he is teaching.

The writer once saw a teacher of geology who was a crude-looking man, and who was conducting a class while coatless. His hands looked as though he had been out gathering specimens recently. These specimens were arranged around the sides of the room in which he was teaching. He

had all kinds of charts and other apparatus for illustrating the principles of geology. He murdered some of the popular rules for asking questions and the like, but he was conducting one of the best classes the writer has ever observed. The pupils were learning geology that was geology, and not mere words. Any kind of method that will secure results of this sort is sound.

The teacher must not be neutral in his class

Some teachers go too far in doing nothing in the class-room on their own initiative, except to question their pupils. They have heard somewhere that self-activity must always be attained in teaching, and that the best teacher does the least; and they interpret this to mean that the pupil should have nothing done for him, but to be quizzed and exhorted. The rule is made to apply as well to the senior in the high school as to the child beginning his primer. But a teacher who is accustomed to base his practice upon careful observation of the reactions of his pupils would realize that the senior in the high school has experiences which will often enable him to apprehend and organize effectively what is presented to him for the first time, so that it is not always necessary that he should be stimulated by the question-and-answer method in respect to everything he is learning. He can dispose of some things as fast as

the teacher can give them to him. The farther along the scholastic route a pupil gets, the greater stock of elementary ideas he becomes possessed of, and the better chance he has of interpreting new ideas and working them into his mental fabric upon their first presentation to him.

A wise teacher would tell his pupils as much as they could comprehend, and just as fast as they could grasp it, because of their experience with similar things in the previous work of the school, or in their lives in the world without. But some one may ask how we are able to tell when a pupil comprehends a principle unless we quiz him. An efficient teacher can tell from the thousand subtle signs in eye and body whether what she teaches is finding lodgment in the minds and wills of her pupils. She will attach least importance to the mere verbal reaction of a pupil. He may speak out of the top of his mind, and use words and phrases that have no content for him; but the features are a bulletin-board upon which is written plainly to the experienced eye what is happening within.

The need of effective lecturing

It seems to the writer that we do not hear enough about teachers striving to cultivate the art of *telling well*. Herbartian pedagogy is the chief offender in this direction, I think. It has exalted quizzing to the detriment

of effective lecturing. To illustrate this point, take the teaching of any topic in history. A genuine teacher would have more than intellectual conceptions in this subject; he would have an emotional attitude toward every question which could arise. Sometimes he would approve, while at other times he would disapprove, and a genuine teacher would help his pupils to interpret facts for their own guidance by his emotional attitude toward them. And he can best express the results of his experience when he takes some part in a class besides quizzing. He can not arouse the emotional life of his pupils best when he simply questions them, and so he can not push their convictions over into action. Every one realizes that there is a vast deal taught in the schools that does not influence the active life of pupils in any large degree. Even if they really apprehend the principles that are aimed at, the latter do not strike deep down into the springs of conduct, and get coupled up with the motives and impulses which are the regulators of conduct. And there is nothing which can bring about this fusion of principles and impulse so readily as the personality of a teacher. If his beliefs have become organized into action, they will be revealed in many subtle ways through voice and facial expression and manner, which will more or less subconsciously be imitated

by the learner, and this will tend to incite in him such attitudes as are taken by the teacher.

It is said often that a teacher has no right to put his own interpretation upon the facts he teaches; he must not let his pupils know how he feels about anything. But this is certainly an erroneous view of the function of the teacher. Whatever adjustment the teacher has made and has found of service, he should seek by every means in his power to get adopted by those whom he teaches. Of course, in matters in which he is in doubt he will lead his pupil to see the reasons therefor, and leave the latter free to resolve the doubt by his own experience. But there is much relating to belief and conduct we teach in the schools that we may consider as settled, and our business is to get this embodied in the behavior of the young in the most economical and effective way possible. The point to be impressed is that the teacher who makes up his mind not to tell anything to pupils, but to draw everything out of them, can never, no matter how skilful he becomes, make much more than half a teacher, especially with older pupils.

The quiz-master

The writer knows a teacher of music who receives compensation at the rate of three dollars an hour for private lessons. This teacher is giving instruction to several young people; and

his method consists in assigning lessons and criticizing them from time to time. He does not really teach his pupils, in the sense that he follows them carefully through their difficulties, and helps them to appreciate properly, and to establish habits of correct execution. He says they should each practise at home three hours a day; and they must have assistance from some one who can help them to work out their tasks successfully. He thinks it is his duty simply to decide when they have the right habits—not to be responsible for the making of them. That is to say, he acts as a critic, and depends upon some one else to do the actual work of teaching. He says this is the proper function of an instructor. The pupil must learn somewhere else than in his own studio. He will point out errors in the student's work, but he will not attempt to study the pupil to find out why he makes these errors, and how he can eliminate them most economically and effectively.

There are teachers in the schools who look upon teaching in much the same way that this instructor of music does. They think their function is to ask examination questions, and to fail a pupil if he does not give the right answers. They do not think they should find out why a pupil can not give correct answers, and help him to overcome his difficulty.

The writer has talked with such teachers, who frankly say that their mission is to assign lessons and to test a pupil's mastery of them in the recitation; and they expect the pupil to get the lessons outside of the recitation. If he needs help he must get it at home or in some other place.

This really makes of the teacher an *examiner,* not an instructor in the true sense. Viewed in the proper light, an instructor is a person who shows a novice how to gain new knowledge and skill in the most economical and effective ways. Mere examination is incidental to his true work. The German instructor more than most others realizes that his main business is to help the pupil to acquire new knowledge accurately and without waste of time or energy. He would rather delegate to some one else the process of mere drill work. Of course, both offices can be combined in the same individual; but if either function must be neglected, that of simple testing is the less important.

By no kind of courtesy can the sort of teaching referred to be regarded as satisfactory. It is possible that music teachers especially have got into the way of thinking that their work should be confined to listening to the performance of their pupils and pointing out errors and ways of improvement, and then leaving it for others to bring about the develop-

ment which is desired. This may be one reason why with years of constant application many persons make only indifferent progress in the learning of music. The moral is applicable to the teaching of every subject.

Making formal rules cover too many cases

Defects often appear in the work of novices which are due to the tendency to make formal rules cover a great variety of cases where the circumstances are not precisely the same. Here is one teacher who has learned that pupils ought always to rise when they recite, and so she keeps at her flock day in and day out to get up from their seats whenever they say even as much as a single word. She wastes time in nagging at her pupils, and she sometimes arouses an antagonistic attitude in them. Doubtless there are conditions under which a pupil ought to rise when he recites. If the class is a large one, those farthest away from the one reciting will not be apt to give their attention to what is going on unless they can see and hear the speaker. They need this help in order to hold their thoughts to what he may say. Then, when a class has been long sitting there is a physiological advantage in standing. Again, if a pupil is to speak for some time he can doubtless have better command of himself and speak with greater force if he rises. But precious time is

wasted when pupils are kept jumping up continually, and it may get to be a mere matter of form with them, which may detract from the spirit of the recitation. When the class is small and the teacher is in close proximity to all the pupils, a much better spirit is engendered by an informal method of recitation. For the teacher here to insist upon a pupil always rising is to place form before substance; she is likely to alienate instead of to win her class. Still again, when pupils are seated in a semicircle, so that they can all see one another, the spirit of the class will often be best when pupils recite sitting rather than standing. Once more, a timid pupil is easily embarrassed when he arises, and for him it would often be better to recite in the way in which he can do it with the least confusion.

The teacher who lacks authority

The inspectors as well as the superintendents and principals lay emphasis upon *lack of authority* as a serious defect in many novices. Often they can not "command the respect and confidence of their pupils"; "they can not discipline well"; "their class-rooms are in disorder much of the time"; "pupils follow their own sweet wills"; "the serious work of the school is not the most prominent thing in the minds of the pupils"; "they are bent on mischief"; "pupils will not

apply themselves to their studies, but waste the precious hours in dawdling away their time, or in raising Cain"; and so on *ad libitum*.

The special teachers reported upon could not correct their failing because they lacked self-confidence. They could not muster enough courage to subdue the spirit of mischief surging up in the bosoms of their pupils; or they were lax in their conception of what should be demanded of pupils; or they had certain mannerisms which operated to their disadvantage. In some cases they lacked physical strength for the needs of the school-room, which fact was revealed in their voices and faces. Probably the most serious of all defects in a teacher is a weak personality, in the sense in which this is generally understood. Pupils come into the school bringing with them tendencies which have to be replaced by others of a different character. When they are inside the school, primitive impulses seek inevitably to come to the front, and there is needed a power constantly acting which will noiselessly yet surely put a quietus upon these impulses, and give encouragement to others of a more estimable kind. Now, this power which must work in silent, unobtrusive, but yet effective ways is the personality of the teacher. It will countenance certain kinds of conduct and condemn others. And what a powerful teacher regards

with favor will thrive in the pupil's thought, feeling, and action; and what he censures will lie dormant in the pupil's springs of conduct. Certain it is that if the personality of the teacher is not more dynamic than that of his pupils, the latter will hold their own course, right or wrong.

The imperious teacher

Contrasted with the faltering teacher is the one who has at all times an imperious manner toward his pupils. He is usually sarcastic in his treatment of the weak and the erring. He rarely excuses failures of any sort; he will not be satisfied with anything less than the whole bond. A timid girl may try to answer the teacher's question, but may get confused and retire under a volley of sharp criticism. Such a teacher misses no opportunity to rasp his pupils. He is always in a critical, faultfinding mood. One rarely hears him saying anything agreeable in his classroom. The result is, of course, that there is an unhappy relation existing most of the time between instructor and student. Pupils get into the way of expecting something distressing to occur. The school in such hands becomes indeed a primitive institution. Truth is gained in such a place at considerable cost to good feeling and happiness on all sides.

Teachers sometimes get the notion that they must

be "full of life" in the class-room. They think that work must always be crowded through; pupils must be made to hurry in their tasks, since speed is of primary consequence in every activity of life. One may visit the class-room of a teacher who has been advised in this way, and who attempts to follow the advice in her teaching, and he can observe the baneful influence of such doctrines. The teacher is usually restless in her work. She constantly says to her pupils —"Hurry up!" "I will give you one minute to do that work. Why do you take so long?" "That problem is easy; you ought to do it at once!" If a child is working at some arithmetic problem, say, and he is striving to see his way through it, the teacher may break in and spoil everything by criticism, when she ought to hold her tongue.

Undue haste in the class-room

It requires self-control for a teacher to wait until her pupil thinks his way through his problems; but one who can not so wait can not teach. A competent teacher will follow the expressions of a child's face, and detect when he really needs help or stimulation. She will keep hands off just as long as the pupil is at work on a problem; and she will develop in him confidence that he will not be interrupted while he is trying to solve his difficulties. One can see in the pupils under an impatient teacher a mor-

bid fear that before they can finish their work he will interrupt them, either to tell them or to scold them or to prod them. This is deadly in its influence on the intellectual and emotional development of a child. It irritates and annoys and discourages pupils.

Humor in the school-room

Many men have written on the beneficent effect of humor in every-day life, but not much has been said regarding the desirability of a teacher having an appreciation of humor, and a disposition to indulge in it on appropriate occasions in his relations with his pupils. The writer of these lines recently went through twenty books on pedagogy and methods of teaching, and he did not find the word humor mentioned in one of them. It should be added that while in three rather modern books, there is no direct statement regarding the value of humor in teaching, still its value is implied in the general suggestions given for handling pupils. It seems safe to predict that in the educational books of the future, chapters will be devoted to a discussion of the psychology of humor, and its extraordinary service in keeping a school-room sane, cheerful and interested.

A teacher with a sense of humor can solve many difficult problems in discipline, where a teacher without it would fail altogether. The errors of the

school-room, in respect alike to intellectual work and to conduct, may often be best corrected if the teacher will take a humorous rather than a tragical view of them. Then, in the stress and strain of modern life, children need the relief which really good humor always yields. Teachers ought to cultivate the habit of taking a cheerful view of many experiences which otherwise would be irritating. Conflict is often rendered more intense by solemn, sedate, angry attitudes in the teacher. Humor releases nervous tension, brings into action the better feelings, and causes one to take a more joyous view of things; whereas if he be utterly without humor, it may take him days to change the unhappy set of his nervous system. Nothing will restore equilibrium in the overtense nerves so quickly as humor.

Cultivating an appreciation of the humorous

Can the sense of humor be cultivated? Modern psychology has tackled this difficult problem, but it has not yet solved it to the satisfaction of the psychologists themselves. But one can not go astray in saying that a teacher should have near at hand some book that in a thoroughly wholesome way presents the humorous side of life. Within the last decade, publishers have brought out a number of series of books containing the wit and humor of the world. Some of these books are probably not very good, and

others may be stale; nevertheless, taken as a whole, they present the sort of thing that has for centuries made men laugh, and it is doubtless based upon a real need of human nature. If a teacher could spend a few minutes every day over one of these books, it would release his own tensions bred by conflict with unruly things, and this would help him in meeting the tragedies of his profession. Goodness knows there are tragedies enough at best, and if there is any way to turn some of them into humor, we ought to do it. What is the use of taking a pessimistic view of everything? This only makes solemn things the more gloomy.

For several years the writer has been able to study the influence of a number of different teachers upon a certain group of children. One of these teachers is a thoroughly pessimistic individual, who never laughs with her pupils. She scolds on slight provocation. If a child makes a slip with his tongue, or his pen, it is made the occasion for faultfinding, —never for a smile. This teacher has a hard time herself in her work, and every pupil in her room is more or less unhappy. Fortunately, children are usually quite insensible to scolding; but still they can not ignore this teacher altogether.

Contrasted with her is another teacher who is exceedingly autocratic, and who drives her children

at a rapid rate much of the time; but she has one saving quality which offsets her failings in other respects. She sees the fun in much that happens in the school-room, and sometimes she and her children can be heard in laughter all over the school building. Her pupils are very fond of her, although she deprives some of them of peace of mind and sleep at night if they lag in their work. But she laughs with them, and they feel she is human. People who laugh together can not long bear harsh feelings toward one another. This last teacher is a very hard worker, but her ability to let go sometimes saves her from nervous breakdown. Alienists say that sanity and mental poise require frequent change in the set of the nervous system; and while there are other ways of producing this change, humor is one of the simplest, sanest, wholesomest, cheapest, and most effective ways of securing it.

CHAPTER X

THE EDUCATION OF GIRLS

A new educational experiment station

FIFTEEN years ago very few people outside of Dunn County, Wisconsin, knew anything about Menomonie, a little lumber town, situated in a sparsely settled section of the state. To-day every one interested in educational progress in any of the leading countries has at least heard of it. Most American teachers are keeping watch of it. And when one visits England, France, or Germany, and talks with school men, the chances are he will be asked to describe the educational reforms which are in process of being worked out in this place. Many leaders in educational and social progress from every part of the world have recently visited Menomonie for the purpose of observing for themselves whether the new theories of education being tried out there are a success. It is an exceptional day now when Menomonie does not entertain distinguished visitors bent on educational errands, and speaking various languages. The thing which attracts these people from afar is the report

that the Stout Institute is demonstrating the practicability and efficiency of new methods in education, and particularly in the training of girls.

The pilgrimages being made to Menomonie to-day, remind one of similar attractions a hundred years ago at Burgdorf and Yverdon, where Pestalozzi illustrated the principle that children should be made to deal with real objects in all their education, instead of simply to learn words. It suggests also the vital reforms initiated at Keilhau by Fröbel, where he gave a practical demonstration of his theory that the pupil ought to be self-active in all his work, instead of simply following the lead of his teacher. It suggests once more the epoch-making work in our own country by Sheldon in Oswego fifty years ago, and by Parker a little later in Quincy, Massachusetts. Each of these places was, in its day, the Mecca for educational reformers. Each has contributed in an important degree to educational development. Some of our most highly valued educational methods to-day were first given a practical test at one or another of these experimental stations.

A home-maker's course

The feature of the work in the Stout Institute which attracts most attention is the "home-maker's course". There are training courses in manual arts and domestic science

for those who wish to teach these branches; but the course in home-making is designed for girls who have no intention of becoming teachers, but who are interested in studying scientifically the problems of the home. The subjects pursued in this department relate directly to one or another phase of home life, though some attention is given to such studies as history and literature. But the list of subjects in the home-maker's course would seem peculiar to a girl pursuing the traditional courses in the typical high school or college. There are no foreign languages in the course, and no mathematics, except such as are applied concretely to the problems of home life. Also there are no formal courses in science, though there is a good deal of work in the application of science to the problems of food, sanitation, and the like.

In the home-maker's course, primary attention is given to the discussion of practical problems concerning foods and food-stuffs, their nutritive and market values, their care and preservation, the foods that are suitable for persons of different ages and occupations, methods of determining the purity of foods, modes of preparing food-stuffs for persons in health and in sickness, the best ways of serving foods, and so on. Next the girls study matters pertaining to textiles, and the making of garments and

articles used for the decoration of the person. Again, there are subjects that deal with problems of furnishing and decorating a house. The needs of persons of varying means are kept constantly in view, so that a girl may learn how to make her house attractive according to the funds at her disposal. She receives instruction regarding the proper way to purchase whatever is essential in the maintenance of a house, the balancing of expenditures for different purposes in the home, and efficient methods of keeping accounts of all household transactions. She studies the relations of individual homes to society. She finds out what local and general associations there are that relate to the home, and what should be its attitude toward organizations pertaining to the industrial, ethical, and moral welfare of its members.

Finally, each girl pursues courses relating to the proper modes of caring for children, and of members of the home when they are sick or recovering from disease. She learns the best methods of home nursing, what should be done in cases of typical accidents, the use of antiseptic agents in disease, effective methods of making a house sanitary, and so on. In order that these practical subjects may be securely grounded, students are required to study the sciences on which they are based—chemistry,

physics, bacteriology, psychology, and child study. But these sciences are presented in a somewhat different way from what they are in the typical high school or college. Mere technical knowledge is not emphasized. What is aimed at is a mastery of those fundamental principles which bear most directly upon the actual problems of home life.

There is a home atmosphere about the institute. The girls take a part in the actual activities in which they will find it advantageous to participate when they return to their father's home, or establish homes of their own. The atmosphere about the traditional high school and college is one of *learning,* often of *memorizing* simply. The work has little or no relation to the actual conditions in the home, any more than it has to those of the office or the shop or the store or the farm. School men have said that this is the best plan, since then these subjects will be of value to every student, no matter whether he comes ultimately to have charge of a home or a store or an office or a farm. The argument is that when subjects are taught without reference to their practical application they will *train the student's mind,* and he can then utilize his *training,* though not his knowledge, in whatever situations he may be placed in maturity.

A home atmosphere

Observing people of affairs, as well as students of

human nature, have abandoned the doctrine that the purpose of education should be to train the mind without regard to the specific needs of an individual in real life. Men look about in the world and see persons who have been through a long course of formal schooling in the traditional subjects of study, which have been so presented that they have had no relation to everyday problems of life, and it is seen that these persons are usually helpless in any practical situation until they learn *by actual experience* how to adapt themselves thereto. They have often to begin practically *de novo,* and master whatever they are called upon to do in real life. An unprejudiced person can find plenty of such people among his acquaintances. And the principle is particularly applicable to the home. Students of the matter have been saying for a good while that the formal studies in the high school and college, as they have been taught, do not adequately prepare a girl to be happy and effective in her home life, though it is not questioned that they have a certain intellectual value, and will be of service to girls who have no interest in, and no need to give attention to, any of the practical affairs of life. It has been generally observed that girls who graduate from high school and college get on best if they abandon the home and go to teaching, or

Education for training merely

take up clerkships, and the like. The Stout Institute is a concrete expression of the prevailing dissatisfaction with the influence of the traditional subjects of study upon the girl's interest and capability in the home.

It must be impressed that in the past the training in the high school and the college has been directed toward the so-called discipline of mental faculties, and not toward practical situations of any sort. Under such a regimen, a girl can not make application of much of what she gains in school to real problems in life. For instance, a pupil may devote one-half of her time in the high school to foreign language and grammatical studies, and yet she may not have an understanding of how a child most readily develops efficiency in oral and written expression. She may have learned the names of a long list of English authors, the dates when they were born and when they died, the names of the works of each author, and the qualities of his style which are set out in a text-book, and still she may not be able to tell a story to a child so as to interest or help him, or to employ really happy and effective expressions in association with her children or with her neighbors.

Any person who keeps his eyes open, and who is not possessed by preconceptions relating to such things, can observe women who have been through

higher branches of mathematics, but who can not keep accounts correctly in their own homes, and who can not figure out successfully many of the practical financial problems with which they should be concerned every day. Again, it is rather the exception than the rule to find girls who, having learned many dates and names in history, really understand the political and social tendencies of the day so that they can talk about them intelligently, or who could take a hand in establishing sound government in the communities in which they live. Let any doubter study the situation in his own community, and note whether the women who are really "doing things" in the best way, domestically and socially, and who are getting the most out of life, are those who have had the greatest amount of traditional education. Of course, it will be granted that even a formal training is better than nothing, much better; but this is not the point at all. There is no reason why education should not be adapted to the needs of the times. There is no reason why it should continue to be remote from the actual problems which women must meet and solve in order to get the most out of life for themselves and for those who are dependent upon them.

It may be remarked in passing that the girls whom one sees at Menomonie and similar schools have a

Vital studies arouse interest

rather different attitude toward their work from the majority of girls one sees pursuing the so-called "training" courses. Many a girl studying foreign language, mathematics, technical science, and formal history and literature in the high school or college is ordinarily not very enthusiastic about her work. She would not exert herself in mastering it if she were not impelled to it by the desire to get a diploma, or by some other more or less extraneous motive. She is not apt to talk informally and spontaneously about what she is learning in school or in college. For her, school is one thing, and life is another and a different thing. One who is much in contact with such girls can not avoid asking himself why it is that what they are learning in all these traditional subjects does not play a larger rôle in their every-day thought and conversation. But it is really different in an institution like the Stout school. Every observer notices this difference. The girls here seem happier, too. They appear to be more spontaneous and enthusiastic in respect to their school work. One finds girls in this institute who have not taken kindly to high school and college work in other places. They have had to be coaxed and even driven to exert themselves sufficiently to keep from being sent home. But they appear to have become aroused

at last, partly because so much of their work now requires the use of the hands, and also because it is concrete, and has a direct bearing upon every-day problems. This sort of thing takes hold of at least many girls who can not become enthusiastic over memorizing studies divorced from all practical situations.

Spread of the movement for vital education

The sort of work which has been commended above is now being introduced in all progressive high schools, and in some of the colleges; though when compared with the traditional studies, it has not yet made much of an impression in most places. In every up-to-date secondary school there is work offered in domestic science; and in some schools there are good courses in vocational subjects for girls. In the leading universities, especially those under state control, there are numerous courses dealing with household arts. However, a considerable part of this work is still rather formal, and remote from the actual needs of girls. Domestic science is not infrequently taught in a verbal and mechanical way. One who inspects schools often sees girls studying this subject who have not clearly grasped the idea that it relates to the actual problems connected with the management of a home. One typical instance may illustrate this principle. A girl had

reached her junior year in a high school in the Middle West. She had had lessons in domestic science once a week for four years—since she entered the seventh grade of the elementary school. She had filled a note-book with formulæ relating to the composition of food-stuffs, as potatoes, flour, beans, and the like, and relating also to the methods of preparing them for the table. But she was requested one day while she was at the dinner-table to tell what was the nutritive value of the bill of fare on this particular occasion. She was asked whether it illustrated a well-balanced dietary; whether it was adapted to the special needs of the different persons who were dining at the time; whether the articles were properly cooked; whether the foods were adapted to the time of the year and of the day when they were served; and whether they were used in amounts calculated to preserve the right proportion of elements necessary for proper nutrition. It will be noticed that these were reasonable questions, and they should have been answered readily by one who had studied the subjects of food and nutrition for four years. But this girl, who had made a record of excellent in her domestic science, and who was regarded as one of the best students in the high school, could not answer satisfactorily any of the questions asked her regarding this particular meal.

Her responses indicated that she was not really directing her attention to the situation immediately before her. The expression of her face and the remoteness of her answers showed that she was trying to *recall* what she had memorized sometime in the past. For four years she had been engaged mainly in memorizing facts presented in text-books, or in lectures; and in recitation she had been exercised principally in recalling these. The supreme test of efficiency in her case had been her ability to pass an examination, not her power to execute the thing she had been studying. She had not been placed very often in situations where she could try out her knowledge to see whether she really knew what she had learned; and whether she could apply what she thought she knew to concrete instances. This kind of teaching can, of course, yield only verbal mechanical results.

A serious defect in domestic science instruction

There is not yet so much of a home atmosphere in the domestic science department of the typical high school and college as there should be; and this is a serious defect which can not be easily overcome in any institution where most of the work has no practical bearings. The majority, perhaps, of those who give instruction in domestic science have not themselves made homes. They have studied the

problems of the home at long range. Some of them do not have a very lively home feeling. What they have acquired regarding the home they have gained for purposes of teaching, and not with a view to actual utilization in real situations. Under such circumstances, it is impossible to give girls genuinely helpful instruction. It should be added in fairness that teachers of domestic science probably have a rather more vital attitude toward their work than the teachers of some other subjects. The typical instructor in foreign language in our country is often a grammarian. Usually he does not think in the language he teaches, nor does he speak it or read it well. But he has mastered the grammar of the language, and for the most part this is what he teaches. Foreign language not being a matter of much practical consequence in our country, our people are not very critical of the kind of instruction given therein, though they like to feel that in some mysterious way the minds of pupils are being trained or disciplined by linguistic study.

Again, those who give instruction in botany often have only a slight knowledge of living nature, and sometimes not a great amount of sympathy with it. Like the teachers of language, they have mastered the technical side of their subject, and this is what they teach. Not infrequently pupils come

from the study of botany who understand but little concerning the conditions under which plants live, how they may be made of service to man, what is their relation to the animal life surrounding them, and so on. And what is true in respect to the teaching of language and botany holds also for physics, geography, rhetoric, and other subjects.

Ever since Locke's day students of education have been wrestling with the problem of making teaching vital instead of merely formal. It is comparatively easy to teach any subject that is worked out logically in a series of definitions and general principles considered apart from the concrete particulars to which they relate. It is always more difficult to deal with actual conditions in human life or in nature than to deal with abstractions. The world as it actually exists is so diversified that it overwhelms many a teacher, and he clings to his generalizations because of their formal simplicity. Many a man teaches psychology, for instance, who feels himself in a strange land when face to face with live human beings, and required to describe their mental processes and their tendencies. Text-book psychology is a far simpler thing than a science of concrete human life. These matters are mentioned merely to show how natural it is for a teacher to present domestic science in a formal, remote, ab-

stract way, as a body of rules and formulæ to be memorized. But the situation in respect to this subject in the high schools and colleges is certainly no worse, and it is probably not much better, than the situation in respect to some of the older subjects.

A curriculum based on discipline

In the foregoing discussion, it has been to some extent assumed that most girls at any rate should be required to devote a considerable part of their time in the public schools to the scientific study of the specific problems of the home. But some readers may think we have assumed too much. There are those who will say: "We are not anxious that our girls should be taught household arts anyway. What we wish is that they shall have their minds trained. We want our girls to acquire good judgment; to gain insight, to be disciplined in respect to accuracy in thinking and facility of expression. We do not care what sort of facts they learn; all we are concerned about is that they shall be rightly disciplined. *Training* is the thing, not the acquisition of a body of facts in any subject." A large number of people in our country to-day think a girl in the high school should study only algebra, geometry, Latin, German, grammar, rhetoric, history, and English literature. These are the subjects, it is claimed, which will really give training in accurate reasoning, in sound

judgment, in keen perception, and in faithful memory.

Does algebra, as an example, train the mind for all needs?

At least half of our people are still exalting studies that "discipline the faculties". They demand that every girl in the high school should study algebra for a year and a half, to take a typical instance. This, they say, will make her keen in her perceptions, and accurate and profound in her thinking. Suppose, by way of a little analysis, we look at the matter in this way: A girl spends one hour a day studying a lesson in algebra, and forty-five minutes in reciting it. While she is preparing her work, she is bent over a book, looking at letters and figures arranged in certain patterns. What is required of her in the solution of any problem is to rearrange these letters and figures into new patterns, following the rules of the game, which have been previously memorized. These letters and figures are never modified in nature or in essence. The only change that can be made in them is a change in relationship, and even this change will not occur unless the girl brings it about herself. She can take her time to it; nothing will happen unless she makes it happen. She can close her book at any moment, and come back the next day or the next year, and the situation will be exactly as she left it. She does not

have to anticipate any transformations which will come about from changes in the situation itself. She is not required to act promptly; she suffers no penalty if she does not think quickly and to the point, because there is no disaster impending upon her tardiness or obtuseness or negligence, unless it be arbitrarily imposed by the teacher.

Now, what does this girl gain which will be of help to her in every-day life? The chances are she will spend some of her time in a kitchen. Seventy-five per cent. of all girls in the public schools will be required to supervise, at any rate, work in kitchens. For a girl to be ready and effective in adapting herself to the situations presented therein, say in judging the value of foods, her eye must be quick and accurate in noting variations in the color, form, size, texture, and mechanical composition of the food-stuffs before her. There is a great variety in the signs which she must appreciate in order wisely to choose and to prepare food. What has her algebra accomplished by way of quickening her perception in these things? In her book she has had experience only in perceiving letters and figures devoid of color, or variety in forms, and absolutely lacking in qualitative characteristics. The very fact that they are *symbolic* indicates that they have no qualitative values. But in the kitchen, the girl must deal with

qualitative characters solely, and the chances are her algebra will be as much of a hindrance as a help to her. For it is a simple matter of psychology that when the eye, or any sense, has perceived in a certain way for a year and a half it will tend to continue to perceive in the same manner. The girl's experience with algebra has deadened, if anything, the appreciation of qualitative characters and values. If she should read qualitative characters into the literal and figurative symbols before her, she could not proceed at all in algebra; the condition of success is the elimination of all qualities, of all values in structure and function, and of all expression of qualitative constitution.

Imagine a girl who has had experience with nothing but algebra; how absolutely helpless she would be in any situation in real life! Exactly the same effect would result from the study of linguistic symbols and grammar, provided the girl did not push through the mere symbols and technique, so that she could appreciate the content denoted by them. Of course, if the girl should be required to study engineering, or any branch of physics or mechanics, then algebra would be absolutely necessary for her. However, not more than one girl in a hundred thousand in the public schools will need algebra for engineering or mechanics. The majority of boys,

perhaps, will have need for algebra as a tool; and people go on requiring of the girl what will possibly be of service to the boy, but what is practically certain not to be of value to herself.

Appreciation of changing phenomena

Let us stay a little longer in the kitchen with our girl—the one who has spent a year and a half in Latin, two in German, one in algebra, and perhaps four in rhetoric, one in mathematical physics, and four in English. We find her now confronted with the problem of cooking some dish, say broiling a beefsteak, or baking bread. In order that she may be successful, her eye must be ready to note the constantly changing characteristics of the thing which is being subjected to heat. Not only must her eye be sensitive to transforming phenomena, but her ear and her sense of smell must be equally sensitive to the changes taking place. She must have some standard by which she can determine whether the changes which are occurring should take place, and if not, what should be done to prevent them? Also, if the changes desired do not take place, what may be done to bring them about? Will any one say that experience in keeping one's eyes on a book in algebra for an hour a day for a year and a half will make one's eye or ear or olfactory sense or sense of temperature any the keener for situations like

these? One has only to present the matter to impress the absurdity of such a contention.

There may be some reader who has followed us through to this point, but who will now say: "Algebra trains the girl's *judgment;* and sound judgment after all is the main thing to be thought of in education." When a person holds a view of this kind, it is almost impossible to convince him of the fallacy of his psychological thinking. The whole matter is so complicated, and the terms used are so general and undefined, that people ordinarily do not make much progress in discussing it. The only way to get at the truth in respect to this matter is to take a girl in any of the typical situations in which she will ultimately be placed. In comprehending the social and natural forces in her environment, or in keeping her house sanitary, or in making it attractive, or in decorating herself, or in conversing with her neighbors, or in instructing and entertaining her children; in all these situations she must reach conclusions readily in view of directly related past experience, and not by means of the method of the equation utilized in algebra. Not once in a thousand times is a woman placed in a situation in which she can equate the factors to be considered, and act accordingly. If she should try to reduce the phenomena before her to the form of the equation, she

would be overwhelmed by them. No one would be so foolish as to say that a study of algebra would give a woman better judgment in deciding whether it were better to send her boy to school at five or to wait until seven; whether or not she should permit her daughter of fifteen years to go out without a chaperon on a sleigh-ride with a boy; whether it would do good to scold her twelve-year-old son for making noise in the house, or whether she might better give him a little leeway in indulging his masculine impulses; whether she should devote herself mainly to social life or mainly to her home, and so on, *ad libitum*. But these are precisely the typical problems that a woman must solve in her every-day life. Of course, we are not now speaking of the very rare woman who goes into mechanics, and so who must master algebra and other branches of mathematics with great thoroughness. We have in view simply the women who will live the typical woman's life, and who must continue to do so in order that society may prosper.

The study of foreign language

An important source of waste in the education of girls who go through high school and college is the failure to make the study of foreign language effective. Investigations made in various places have shown beyond a doubt that not one girl in fifty who

studies a foreign language in this country masters it so that it becomes a ready instrument, either for the gaining or the expression of thought. Interesting facts bearing upon this matter may be observed in graduate schools. All such schools require that a student must have a reading knowledge of German and French before he will be given his doctor's degree. It is the usual thing for candidates for such degrees to go up to the last year, and then begin to get up their languages so they can pass a simple examination in them; and these students constitute a very small, select group, devoted to scholarship, and planning to lead an academic life. They have not been using the languages, although they had studied them for several years in high school and college. It is a common thing tc hear persons who have obtained their doctor's degree say they can not read the foreign languages with any measure of success. It is very rare indeed to find an undergraduate student who has been put through foreign languages in high school and college who can either read them or speak them. The writer has often asked such students to get the substance out of an article or a book written in French or German; and where one student can do it there will be forty-nine who will not even attempt it, claiming it would be an utterly fruitless and most wearisome task.

Training in the humanities

But some readers who are devoted to things linguistic may say: "Our girls ought to be trained in the humanities. Men have expressed their hopes and fears and aspirations through language, and this is the best material for the training of youth of either sex." *Humanism* has been a term with which men have conjured throughout the recent history of education. "Culture" is another such term, which men have used without having any clear notion of what it denotes. I have tried it upon hundreds of intelligent seniors in the university, who were in the habit of using the term approvingly as the aim of education; but when asked to analyze it, and show precisely what is essential in a course of study in order to have pupils secure it, they would go wandering into space and never come back. Such terms, through long non-critical usage, have become loaded up with obscure, undefined, aspirational feeling, and with this content they are now often put forth as indicating the proper aim of education.

A girl will absorb humanism from the study of the grammar of a foreign language in the high school in about the measure that she would acquire astronomy by studying an almanac, or psychology by looking at a phrenological chart. If we interpret humanism to mean a participation in the life of the

race—its *life,* not merely its forms of communication—then we may accept it as a worthy end to be striven after in education. But the simple fact is that girls in the high school and college who have spent their time largely in languages are apt to know very little about the real life of our ancestors. And yet there are people in America who go on making the claim, shutting their eyes to facts to the contrary to be found all about them.

A course for the girl of to-morrow

What sort of an educational régime will the American girl of to-morrow be put through? First of all, she will not receive precisely the same treatment as a boy does. Those who first urged that girls as well as boys should be educated, maintained that the former were entitled to everything the latter received. For a long time boys had the opportunities of schooling; and when it was decided to give the girls an equal chance with them, it was natural that the system already worked out for the latter should be adopted for the former. The demand all along has been—let our girls have as *good* an education as we give our boys; and this has been interpreted to mean the *same* education.

Without doubt this is the way it should be interpreted in considerable part, but there are exceptions which will be noted presently. We may first glance

at the training which the girl will receive in common with the boy. Of course she will be taught to read, to write, to spell, and to make arithmetical calculations adequate to her needs. The elementary school gives her this sort of thing quite effectively to-day. However, there is still left, even in the elementary school, some work based on the aim of disciplining the faculties. There are problems set in arithmetic for mere exercise, without regard to their bearing upon any phase of practical life. Happily, though, in most of our progressive communities this kind of arithmetical work has been eliminated, and what remains is of genuine value for all individuals, girls as well as boys. Not so much can be said for spelling, however; in the majority of schools there is still a considerable amount of work which is purely formal, and largely valueless. A girl who completes only the elementary or even the high school will never have to spell more than twenty-five hundred words at the outside. But in some places the elementary school still requires the girl to practise on from seven to ten thousand words, with the result that often she does not learn to spell surely and automatically some of the simple words which she will frequently use in real life.

Within the last decade the reading in the elementary school has been largely revolutionized, so that

now pupils read for the purpose of enjoyment and appreciation, and not for mere discipline or "culture". Here, as fully as anywhere, is seen the triumph of a rational view of education, which is gaining headway in this country.

The elementary school in advancing communities gives the girl some experience in music and drawing, though not so effective as could be desired. But every year one may witness evidences of growth away from formalism toward efficiency in the teaching of these important branches. Of all the subjects in the curriculum, none will be found of greater import in the life of the girl than music and drawing. Any one who looks upon human life from the larger standpoint sees that a vital need of woman is to attain harmonious social adjustment, to become attractive in conduct, in personal appearance, in the capacity to interest people, and to provide for their enjoyment in agreeable ways. Drawing and music, taught so as to give pupils an appreciation of harmonies in all the varied situations of real life, and ability to create such harmonies in form and color and sound and general arrangement will prove of great service to any girl, no matter in what places her lines may be cast. But these subjects must be presented so that their real and vital values, instead

of mere technique, may be gained; and this is already being achieved in many of the public schools in this country.

The value of history for the girl

The elementary school of to-day is seeking to give to its pupils some insight into the history of the race. This work has been severely criticized during the last few years, because history has been presented largely as a catalogue of dates and names. However, this subject is now receiving the constant attention of progressive educators; and already in many schools it is being made an attractive, while at the same time faithful, account of the life of our predecessors, emphasis being given to the experiences of men in their efforts to adjust themselves to one another and to nature. Here again is a study of the greatest importance for the girl as well as for the boy, but especially, perhaps, for the girl, because when properly presented it will give her a picture of human life in its ethical and moral relations, in which she should be made particularly interested. The boy is better suited to deal with the laws of nature on the mathematical and physical side, for which the girl is not so well adapted.

The elementary school in some places, unfortunately not in most places yet, endeavors to get its

The study of nature pupils into *rapport* with nature, and especially with the life of plants and animals. No study could be of greater value for the girl than this. Her temperament fits her admirably to appreciate living nature. Her range of enjoyment in life will be vastly increased when she is helped to feel the great forces that tend forward and upward in the world about her. She needs that sort of acumen, too, which may come from close communion with nature during her plastic years. Her mode of life in times gone by made her more subject to fear and superstition than has been the case with man. The untaught woman is apt to live in dread of the phenomena of nature a good part of the time. She does not easily think of natural events as springing from impersonal causes. She is animistic by inheritance. But the daily study of nature throughout her educational course should replace fear by confidence, and superstition by scientific insight. The failure of most of our schools today to give a girl daily experience in tracking out the laws of nature in its varied manifestations constitutes one of the greatest weaknesses in contemporary education, and indicates a defect which ought to be remedied without delay. These subjects the girl must pursue in common with her brother in the elementary school. They

Vocational training

constitute the fundamental requirements, no matter in what particular sphere of life the girl may be placed. However, many girls must earn their own living, and they must begin soon after they leave the elementary school, which makes vocational training a necessity. But the girl can not get such training during the elementary school course. This course is none too long for her to acquire the general education which is absolutely essential for a well-poised, successful life. This suggests a pressing problem which has already been taken up in some communities—the lengthening of the elementary school period by a year or two, which must be devoted to vocational training. There can hardly be any doubt that in our own country the period of schooling for all children should be lengthened. There is no reason why it should not be. The eight-year plan for the elementary school can not be regarded as final. There is nothing in human society or in nature which requires that most pupils should cease their school work after the completion of the eighth year. In the past, economic necessity established eight years as the limit of universal compulsory schooling. But our financial condition is improving, knowledge is increasing by leaps and bounds, and more is being constantly demanded of the rising generations in

order that they may adapt themselves adequately to contemporary civilization. All this means that the compulsory school period must be extended for the girl, as well as for the boy.

For those girls who have leisure and means to go through the high school into college, the way is open to carry forward the lines of work begun in the elementary school. The fundamental needs of the woman can be ministered to best by art, music, history, literature, science, and the subjects that bear directly upon social and ethical problems, and the problems of home-making in a large sense, special importance being given to the care and culture of children. No matter how long her interest and her economic condition will permit her to continue her studies, these great fields will offer attractions to her, for it is practically impossible to exhaust them.

EXERCISES AND PROBLEMS

EXERCISES AND PROBLEMS

I

GOOD ORDER

1. What can be said for and against the proposition that the chief problem in the school-room is to preserve good order? First say what "good order" means, specifying concrete details.

2. Discuss the advantages and the disadvantages of requiring pupils once or twice each day for five or ten minutes at a time to sit erect in their seats, fold their arms, and keep the body as quiet as possible, not moving the head, the eyes, or the feet. Does it make a difference whether the pupils are in the elementary, in the grammar, or in the high school? Does it make a difference whether the school is in the city or in the country?

3. What changes have occurred in the methods of securing good order in the schools in which you had your training? What are the results of these changes on the behavior of pupils?

4. Describe in concrete detail five actual instances in which a teacher caught and held the wandering attention of pupils. Point out in each case the educational principle involved.

5. Should good order in the school-room be maintained primarily for the benefit of (a) the individual, (b) the class as a whole, or (c) the teacher? Discuss in detail.

6. Describe, as in 4, several actual instances in which a teacher failed to hold the attention of pupils. Point out the precise reason in each case.

7. Make a concrete report upon an actual recitation you have attended, showing why the class as a whole, or individual

members thereof, were inattentive during the entire period, or some part of it. Get at the reason in each case.

8. Describe a typical school-room in which irrelevant trains of thought are frequently suggested. How would you remedy the situation?

9. What are the chief sources of irrelevant trains of thought in country schools? In city schools? Is there a difference between younger and older children in this respect?

10. Mention possible objections to the plan of having an interval of three or five minutes after every recitation or study period of twenty minutes in the primary grades, thirty minutes in the grammar grades, and forty-five minutes in the high school? Are these objections fundamental and vital?

11. Suggest practicable methods of relieving the tensions of pupils without giving them frequent intermissions or relaxing periods.

12. How can a teacher discriminate between fatigue and lack of interest in the school-room?

13. Suggest how a teacher may discriminate between disorder which is intentional and malicious, and that which is due to an overflow of "animal spirits".

14. Should a teacher stand while engaged in teaching? Say why, whatever your answer may be.

15. Would you seat pupils alphabetically? Would you adopt such a plan of seating the first day of school? Give reasons.

16. List different methods of regulating communication during study hours. Discuss the adaptability of each to different grades.

17. Some of our largest and best high schools have abolished recesses. Some have instituted a single session daily from 8:30 A. M. to 1:00 or 1:15 P. M. without intermissions. Discuss the advisability of such an arrangement.

18. Recently a superintendent was asked to forecast the weather. He replied, "A storm is certainly coming, for the children act as if possessed." Should disciplinary standards be

adjusted to barometric variations? Do you ever feel "mean" before a storm?

19. Do pupils in city schools require as frequent intermissions or relaxing periods as pupils in rural schools? Do they need more of such periods? Why?

20. What arguments may be offered in favor of and against abolishing all recesses in schools of all grades, in the city and in the country?

21. Discuss the plan proposed in some places of keeping schools in session throughout the year, with one-week intermissions at quarterly divisions of the year.

22. Discuss the plan of lengthening the school-day by adding one or two hours, pointing out the advantages and the disadvantages of such a scheme.

23. Point out characteristics in a teacher which tend to incite disorder in a school. In the same way point out characteristics which have the effect of encouraging good order. Can these characteristics be modified by training, or by voluntary effort on the part of the teacher? Have you known teachers who have corrected traits of personality which were a handicap to them in the school-room?

24. Suggest feasible and effective ways in which a teacher may get rid of his own tensions which follow upon arduous work in the school-room, to the end that he may not incite disorder in his pupils by overstimulating or irritating them.

25. Does a long vacation, extending over two or three months, help a pupil to give prolonged and concentrated attention to the work of the school in the autumn? Discuss the principle or principles involved, and make practical applications to the every-day work of the school.

26. Describe concrete cases of pupils who are disorderly because of physical defects or deficiencies. How would you remedy the defects?

27. Comment on the part that skilful questioning by the teacher plays in determining attention and good order on the

part of the class. Indicate what is meant by "skilful questioning", and give a few concrete examples in illustration of it.

28. May most children above the fourth grade be allowed, without asking permission, to move quietly about the schoolroom when necessary, or even to leave the room for a brief time?

29. When pupils are passing from their regular recitation-room into another part of the building for manual or gymnastic work, for example, should they be given freedom to move in irregular groups, and engage in conversation, if not boisterous or unduly noisy? Or should they be compelled to march in a definite order, and with military precision, without any communication whatever?

30. Is it probable that the utilizing of the school-house as the civic and social center of the community will simplify the problems of good order in the school? Why?

II

DISCIPLINE

1. Describe the behavior in school of a boy who has been "spoiled", as you regard the matter. Describe the behavior of a girl who has been "spoiled". Do they get more out of life than their associates do? Give concrete evidence in support of your view. How should they be treated by the teacher? By their associates? Why?

2. Give an account of the early training of a boy or a girl who seems to be in conflict much of the time with his parents, his teacher, and his associates. In your opinion, could the individual have been trained so that he would now adjust himself easily to people about him? How?

3. Discuss the advisability of children appearing in public at an early age under circumstances marked by great popular approbation, as on Children's Day, etc.

4. Are country children more frequently "spoiled" than are city children? Or is it the other way around? What is the evidence upon which your answer is based?

5. Have you ever seen a dog or a horse or a kitten which has been "spoiled"? Have you seen one "cured" of its faults? How?

6. Are problems of discipline more serious and difficult in American homes and schools now than they were twenty-five years ago, say? Or is the reverse true? If any changes in this respect are taking place, show what forces are producing them? How is it in the community in which you spent your childhood?

7. Describe the intellectual, social, ethical, and physical traits of a boy or girl who is a favorite with his parents or his teacher. Is he to be congratulated upon being a favorite? Why?

8. Are influential parents as a rule more eager to have their children shown special favors than teachers are eager to favor them?

9. Is the proportion of men teachers in rural schools increasing, or is it becoming less? Why? With what results in respect to the training of boys especially?

10. Most of the teachers in city schools are women. In the vast majority of elementary schools, there are no men at all. Has it been or can it be shown that definite evils in such schools are due to the absence of masculine influence? Do not be satisfied with a mere conventional answer to this question; in some way, get at the actual facts in the case.

11. Have you known women teachers who could discipline boys better than the typical male teacher could do? If so, describe these women, and show what methods they employed. Do men teachers get along with girl students as well as women teachers do?

12. According to your experience, are athletic teachers bet-

ter disciplinarians than others? Comment on the facts as you find them.

13. "My science teacher one morning said: 'G— and J— came late to class again this morning, and I told them yesterday that I would send them back to the study hall the next time it happened.' 'Did you send them?' I asked. 'No,' said he, 'but if they are late to-morrow, I'll send them out for a week.' This teacher dealt out the heaviest penalties in our entire faculty, and had by all odds the worst discipline." Did you ever know of a similar instance? How would you explain the case?

14. Is there any direct relation between personal attractiveness in the teacher, and successful teaching and discipline? In your own experience, did the matter of appearance and dress play any large part in determining your attitude toward your favorite teacher?

15. Ought any form of school work to be made a punishment for a pupil's misconduct? Be specific.

16. What artificial standards of conduct might the school set up by a too rigid insistence upon rules against whispering, moving about the room, and others of like import? Is this likely to lead to confusion in the child's mind regarding relative values in moral conduct? Make a list of ten school-room offenses, and point out those that have in them a moral or ethical aspect, and those that have not.

17. Is it ever advisable to allow boys to settle their quarrels on the school grounds by fistic contest? Comment on Dr. G. Stanley Hall's view: "I would have every healthy boy taught boxing at adolescence, if not before."

18. Describe five cases of correction of pupils in which the principle of suggestion was employed effectively. Describe any case you may know in which the principle was not successful.

19. Describe one or more instances in which the use of corporal punishment as a means of correction proved to be (1) effective, or (2) an injury to the child.

20. When, if ever, should corporal punishment be administered in the presence of an entire school?

21. Assuming that children differ greatly in temperament, training, and experience, is it possible in any school to use the same means of correction, or to apply the same rules of conduct to each individual? If not possible, how is the teacher to escape the charge of favoritism?

22. Is Spencer's theory of "natural" punishment for misconduct feasible under ordinary school conditions? Illustrate with concrete instances.

23. In meting out punishment to an offender against good order in the school-room, what is the fundamental principle involved;—that the child must be corrected for his own good, or because his conduct is opposed to the welfare of the school as a whole? Are these two ends antagonistic in the final outcome?

24. Comment on the principle laid down by Bagley, that "Punishment should not be used for the purpose of 'making an example'."

25. Is the following advice by Locke ever applicable to school-room situations? "Pay no attention to those faults in children that time is bound to cure." Mention a few of such faults.

26. Discuss the matter of preventing undesirable activities or actual misconduct in the school-room by substituting for the routine work of the school some other form of activity. Suggest some feasible and desirable substitutes.

27. Ought the school, as far as possible, to secure good conduct by removing incitements or opportunities for wrong-doing; or ought it to give the pupil a chance to exercise choice in matters of conduct?

28. Is it proper to punish pupils for inattention? If so, suggest the circumstances under which it may be done, and the types of punishment that may be appropriate.

29. Ought a pupil ever to be sent home from school for misconduct, or kept in at recess, or after school?

III

FAIR PLAY BETWEEN TEACHER AND PUPILS

1. Take five actual cases of school-room discipline, and show whether the point of view of the teacher and of the pupil was the same or different in each case. Would you have treated the pupil differently in any or in all these cases? Why?

2. Describe five cases of unjust school-room discipline, and point out why each was unjust. What was the effect of such discipline on the pupil? Why?

3. Is it easier or is it more difficult to administer discipline without injustice in city as contrasted with country schools? Why? Give typical concrete instances to illustrate the principle.

4. Can one rely upon a pupil's statement as to whether or not his teacher deals with him fairly? Does it make any difference whether the pupil is in the primary school, the grammar school, or the high school?

5. Describe in detail two or three instances in which a teacher solved difficult problems of discipline by securing the coöperation of pupils.

6. Should the attitude of the teacher toward his pupils be one of authority, or one of good-fellowship? Are the two attitudes antagonistic?

7. Should the teacher encourage pupils to criticize one another in the class-room in respect to either work or behavior? What are the advantages and the disadvantages of this?

8. According to your observations, do teachers as a rule appeal to the sense of fair play in respect to the government of the school, alike in the class-room and on the playground? Comment on the situation as you find it.

9. Do women teachers govern their schools by securing the coöperation of their pupils more largely than men teachers do? Or is the reverse true? Why?

10. Is the sense of fair play as keen in country as in city schools? Give concrete evidence in support of your view, and suggest an explanation for the facts in the case.

11. How may a teacher use the sense of group loyalty to advantage in the government of the school? Can a teacher succeed in governing his school if the group as a whole resists his authority? Cite typical cases to illustrate the principle.

12. What traditions in a community may turn a group of pupils against a teacher without any fault of the latter? Is it the same in the city as in the country? How might a teacher deal successfully with such a situation?

13. Describe two or three actual cases in which a teacher lost the respect of his pupils. Could this tragedy have been avoided?

14. Discuss the matter of allowing a bright pupil to raise his hand continually in recitation, indicating his ability to answer a question no matter to whom it is addressed.

15. Point out the results in the kindergarten of having the teacher enter into all the plays and other activities of the children.

16. Is the problem of holding the respect of pupils more serious in the high school than in the elementary school? If so, why? Is it more serious in the country than in the city?

17. Mention several school-room situations in which a teacher should impress a pupil with his shortcomings. Mention several situations also in which a pupil would be injured by keeping his failings constantly before him.

18. Discuss this proposition: "A child can not grow in strength, intellectual or moral, unless he is made sensitive to his deficiencies, and is urged unceasingly to overcome them."

19. Do pupils respect a teacher who habitually praises them for their conduct and their work as much as they respect

one who habitually criticizes them sharply for their errors and failures?

20. If possible, read *The Young Barbarians,* by Ian MacLaren, and in view of the principles presented in this chapter, discuss the several types of teachers portrayed in the book. Read *The Hoosier Schoolmaster* also, and comment on the type of teacher presented therein.

21. Describe a concrete case in which censure or punishment of a pupil before his fellows was wholesome and effective, alike for himself and for his associates. Describe a case in which contrary results followed public correction. Why in each instance?

22. Do you know a teacher who can govern a school without making any prohibitions regarding communication? If so, describe her methods.

23. Discuss the following statement made by a school principal: "I used formerly to say to my teachers, 'Be partial always.' Was my advice proper? Can it be followed when penalties are laid down explicitly in advance for every sort of misdemeanor?"

24. Discuss the following: "I asked a very reliable high-school boy what per cent. of his fellows would lie to a teacher when driven into a corner. He said, 'Eighty per cent.' His answer in my opinion was altogether too high, unless he was thinking of special teachers." Will pupils lie to some teachers more readily than to others? Why?

25. The boys of a school were called together by the principal. He said: "Boys, the great majority of you use and enjoy the dressing-room; but I can not longer tolerate certain misconduct connected with its use. I have no time to chase down the culprits, but I will lock the room if it seems necessary." Was an injustice done to the majority who were innocent?

26. "I visited the Junior class of an English teacher to hear the scheduled debate. The class, with one exception, for fear

of the visitor perhaps, reported 'Not prepared.' After I left the room, the humiliated teacher administered a savage 'tongue-lashing' to the pupils. A parent or two were highly offended, and one of the girls a year after graduation complained that this teacher was 'still telling lies about us'." What should the teacher have done in this case?

27. Give instances in which you think a scolding administered to a school as a whole will prove wholesome and beneficial. May it be a good tonic for individual pupils at times?

28. Is it advisable to post up conspicuously the names of pupils who have failed in any school exercise, or who have been remiss in meeting school obligations? Comment on the practice in vogue in some schools of giving badges or emblems to individual pupils because of excellence in school work. What different element enters into the case when a trophy is won by a school team for victory in basket-ball or debating?

29. As a rule is there greater coöperation betweens pupils and teachers of manual training, domestic science, and gymnastics than between the same pupils and their instructors in other branches? If so, account for the difference.

30. Ought teachers in the high school to make a definite concerted effort to come into social relations with their pupils outside of school hours? Suggest some ways by which this can be accomplished. Comment on the desirability of having regular high-school dances, supervised by the teachers.

31 In any group of school children above the primary grades, what proportion will be well-disposed toward schoolroom conventions and ready to coöperate with the teacher? What proportion will probably be in a defiant attitude? What proportion will be indifferent, and ready to take sides either way. Toward which of these groups ought the tact and skill of the teacher mainly to be directed?

32. From what kind of homes for the most part do children come who are noticeably deficient in the attitude of fair play

both toward the teacher and toward fellow-pupils? Is nationality a factor in determining this attitude?

33. What opportunity do written examinations, especially when made the test of promotion, afford for fair play on the part of both teacher and pupil? Do they as easily lend themselves to opportunities for unfairness on both sides?

IV

TEACHING PUPILS TO THINK

1. It is frequently said that young children, under eight years of age or so, can not think. Do you agree with this view? Why? If you believe that such children can think, give concrete examples illustrating the principle.

2. Give concrete examples—at least one in each case—showing how a child might think in dealing (1) with his doll; (2) with his pet dog; (3) with a brother or sister; (4) in interpreting something that is said to him by his mother; (5) in a problem involved in repairing a broken toy.

3. Show how a lesson might be given on the history of the community in which you live that would require pupils to think in an effective manner. Indicate how the lesson could be conducted so that pupils would not be required to think at all in a true sense.

4. Suppose you are required to teach the history of the community in which you live, so that your pupils may be able to think clearly and effectively when they are confronted with any problem of civic improvement; mention five principal topics which you would treat in such a course in history. How would you treat these topics?

5. Suggest a method of leading pupils to think accurately regarding the relations which should exist between the people of a community and the public utility corporations therein.

6. Present outlines of lessons designed to lead pupils to

think straight on the following topics pertaining to the government of the community in which they live: (a) the abandonment of all private wells in the community; (b) requiring plans for new buildings to be indorsed by a municipal inspector of buildings before they can be carried out; (c) requiring that no person may erect a building so close to the edge of his lot that he must borrow air and light from adjoining lots; (d) giving a board of public works the right to improve any street in a city, and requiring the property abutting thereupon to pay for the improvement.

7. Comment on the methods followed in the text-books in history which you studied in the elementary school; also in the high school. Comment in the same way on the books you studied in civil government, or civics.

8. Take some definite topic in history, say the passage of the fugitive slave law. Suppose the text-book to state, as usual, the time of passage of the bill and its provisions. Set three problems which you think would be appropriate for a sixth-grade class.

9. Which would you favor for civic training in the high school, the organization of a mimic house of representatives, or the orderly conduct of the affairs of the athletic association in the school?

10. Comment on the following proposition taken from an educational book: "There is one study in the elementary school curriculum which is especially well fitted to teach pupils to reason, and this is arithmetic."

11. Suggest a feasible and effective method of training a pupil so that he may be able on his own initiative to correct his errors in spelling; also in grammar.

12. "A pupil will remember *what he himself has done,* not what he has simply looked at or listened to." Show how this principle applies to good memory in (a) history; (b) rhetoric; (c) reading; (d) Latin; (e) French; (f) physics.

13. Comment on the efficiency of the following method:

"On the day of the last presidential election, I tried the plan of holding at the high school with which I was connected an exact imitation of the original. All students, down through the fifth grade, voted. Students acted as election officers in every detail. The election was preceded by registration, rival rallies, etc. I followed it with the meeting of presidential electors at the capitol in due season, and the final canvass at Washington."

14. Give some concrete examples of methods by which pupils may be made to feel that what is being done in school will be of practical value in the needs of daily life in maturity.

15. Point out some ways in which school-room play may be utilized to train children to think.

16. Is the ordinary written examination, especially when made the test of promotion, a means of cultivating the power to think? May it be made such a means? If so, show specifically how it can be so utilized.

17. Comment on the practice of compelling pupils in the upper grades and in the high school to keep note-books in all subjects, these note-books being carefully filled out under the teacher's direction, and regularly inspected and marked.

18. Does the topical recitation, especially in grades below the high school, contribute to thinking ability, or does it call on memory only? Discuss the several forms of recitation from this standpoint.

19. Show how the use of pictures in history, literature, and geography may be made to contribute to definite thinking on the part of children. Are motion pictures better for this purpose than lantern or stereoscopic views? Why?

20. Contrast the two following methods in teaching a sixth-grade geography class the nature and origin of soil:

(a) The following questions were asked: "What is soil?" "Name some of the kinds." "What is weathering?" "Erosion?" "Corrosive agent?" "Define denudation." "What is the disintegration of rocks?"

(b) The pupils were taken on a trip to a stone quarry. There they saw the formation of the soil actually going on. They noted the differences in hardness, compactness, and color between the upper and the lower layers; the gradual gradation from solid to less solid rock, to rock waste, and then to soil. The relation of the rock to soil was unmistakable. The contribution of plants, air, and water to the formation of soil received concrete illustration. Then the class took up the discussion of the subject in the text.

21. Comment on the following instance of geology teaching: "A teacher in physical geography giving a lesson on rocks, brought his specimens to class, and lectured on them, holding up each kind to view as he talked. At the end of the period he carried away the rocks, and at the next recitation upbraided the pupils when they failed to recognize the various specimens when he again held them up."

22. Comment on this example of English teaching: "A second-year class in the high school was reading the Sir Roger de Coverly papers. The command was given: 'Point out the satire on page —.' A hand went up:—'What is satire?' Teacher:—'How many know what satire is?' No one responded. Teacher:—'Who can write satire on the board?' A child responded, was sent to the board, and wrote 'satyr'. The teacher then sent a pupil to the dictionary to see how 'satire' was spelled, and he happened on the right form. At her request, he read the definition of the word, which was probably meaningless to the class. Without any comment the teacher said, 'I hope to-morrow you will all know what "satire" means!'"

V

TEACHING PUPILS TO THINK—*Concluded*

1. What studies taught you in the elementary or in the high school do you remember most vividly and fully at this time? Try to account for the fact as you find it.

2. What studies or topics which you pursued in the elementary or in the high school have been largely forgotten? Explain the matter in detail.

3. Take a study like grammar, and mention principles taught you in the elementary school which have remained with you without becoming obscured. Are you aware of having forgotten some of the principles you learned in this subject? Look up the matter in a grammatical text-book, and say why you have remembered some principles, while others have been forgotten.

4. Discuss the subjects of rhetoric, algebra, geometry, and German according to the directions given in exercise 3 for the discussion of grammar.

5. What proportion of what you learned in geography in the elementary school have you forgotten? Take what you know about the products of different countries, and of different sections of our own country, and try to determine whether this knowledge was gained in school, or in some other manner. Comment upon the results of your inquiry viewed in the light of the discussion in chapter V of the text.

6. Show how you could lead pupils thirteen years of age, or thereabouts, who live east of the Mississippi River, to think straight regarding the extraordinary development of the city of North Yakima, in Washington. Keep in mind that a very few years ago the entire Yakima Valley was a sage-brush desert.

7. Comment on the following in view of the principles developed in chapters IV and V of the text: "I propose to have the children of Mississippi taught the geography of the state

by having them start with the study of cotton. I will have them work back from the cotton crop to soil, climate, etc., and forward to transportation, location of cities, etc."

8. When a certain pupil in the seventh grade first encountered the word "genuine", he pronounced it "genuīne". How would you make him take the initiative in correcting his mistake?

9. Show in detail how you would lead a pupil to take the initiative mainly or wholly in demonstrating the proposition,—"The sum of the interior angles of a triangle equals two right angles."

10. A mother was observed "helping" her eight-year-old child to prepare his reading lesson for school. Whenever the boy hesitated at a new word, the mother would pronounce it for him, he would repeat it after her, and go on to new difficulties. Comment on the efficiency of this method.

11. A father was observed "helping" a boy in the sixth grade to learn some definitions. The teacher asked the boy to look up the words assigned in the dictionary, and learn the definitions. The father assisted the boy to find the words. The former read the definitions to the latter, and decided which definition had best be chosen in each case. Then he required the boy to repeat the definition until he had memorized it. What do you think of this method?

12. Suppose a beginner in Latin, coming upon the word *tempus*, can not recall what it means. Indicate how you would lead him to work out the meaning.

13. Comment on the following lesson in geography, given to a class in the fifth grade:

With four different maps on the wall, and with the aid of past lessons, the teacher derived the following facts about India from pupils who had never before had a lesson on that country, and who had as yet not been assigned a lesson on it in the text: (a) That India is in the hot belt, extending nearly to the equator. (b) That it is in the belt of trade winds. (c)

That rainfall is slight in winter, for the monsoons are *outward-flowing* winter winds; and that the rainfall is very heavy in summer, for the monsoons are *inward-flowing* summer winds. (d) That the heaviest rainfall is on the slopes of the Himalayas because the winds laden with moisture are cooled by the air of the mountains and produce rain. (e) That the rainfall on the slopes of the Himalayas furnishes water to two rivers. (f) That the valleys of these two rivers are fertile, hence densely populated. (g) That the coast-line is very regular, hence few good harbors. (h) That the products will be those of a hot moist climate, viz.: cotton, spices, etc.

14. Is the following testimony from a man, now principal of a high school, quite exceptional, or is it typical:

"In the fifth grade we began the study of physiology. We were supplied with a text-book full of definitions, and containing also pictures that filled me with horror when I first looked at them;—pictures of men with their body walls slit open, and turned back to reveal the internal structure. At class we were called on, and rattled off as many definitions as we could; so long as we were not required to explain them we were all right. It makes me smile to think of the queer ideas I got from this study. For instance, I learned that 'The effect of alcohol on the nervous system is that it deadens it and upsets it.' My conception of the deadening was that the brain died, and remained decayed in one's head."

15. The following state examinations were set recently in different states. Comment on each question from the standpoint of its suitability to encourage pupils to study and teachers to instruct with a view to developing the power of thought in the subjects covered. In certain cases two examinations in the same subject are presented, so that you may compare them in respect to their relative value.

PHYSIOLOGY AND HYGIENE

95. (a) Describe an experiment with an animal membrane to illustrate osmosis. (6) (b) Mention *two* examples of osmosis in the human body essential to the continuation of life. (4)

96. (a) Discuss the necessity of a mixed diet. (4) (b) Make a list of food articles for a dinner that would insure a mixed diet, giving the nutritive value of each food mentioned. (6)

97. (a) Make a drawing of the alimentary canal, indicating each part. (4) (b) Give hygienic directions that should be observed in eating and give a reason for the observance of each. (6)

98. (a) Give the number and the position of each of the different kinds of teeth in a full adult set. (6) (b) State the main cause of the decay of teeth and the best method of preserving teeth that are partially decayed. (4)

99. (a) Name and locate the valves of the heart. (6) Describe the action of *one* set of the valves of the heart. (4)

100. (a) State the necessity of respiration. (4) (b) Describe an experiment you have observed to illustrate the normal action of the chest and the diaphragm in breathing. (6)

101. State the effect of the habitual use of alcoholic drink (a) on digestion, (5) (b) on the nerves. (5)

102. (a) State the importance of getting rid of the wastes of the body. (4) (b) Mention *three* waste products of oxidation in the body and state how each is eliminated from the body. (6)

103. (a) Compare the structure and the method of control of the voluntary muscles with the structure and the method of control of the involuntary mus-

cles. (6) Mention (b) *two* important voluntary muscles and (c) *two* important involuntary muscles. (4)

104. Describe the proper treatment (a) of a burn, (b) of a fracture. (10)

105. (a) State the dangers of dust. (4) (b) Describe proper methods of sweeping and dusting. (6)

106. Give *five* practical suggestions for the care of the eyes. (10)

107. Describe adaptation of structure to function in *each* of the following: (a) spinal column, (5) (b) shoulder joint. (5)

Or

108. Describe the gross structure and state the chief function (a) of the brain, (5) (b) of the spinal cord. (5)

109. Describe experiments you have observed to show the presence (a) of proteid, (5) (b) of fat. (5)

PHYSIOLOGY

1. Explain in full how muscles are fastened to the bones. 2. What is the value of absorption? Explain by examples. 3. Name and locate the bones of the skull. 4. How does reflex action aid a person in walking? Explain reflex action. 5. Explain the construction of the heart by diagram or otherwise. 6. Name all the digestive juices, and the function of each. 7. Explain your method of ventilation in a school-house. 8. Name four texts on Physiology, and designate the one you teach. 9. What is the function of the kidneys? 10. Distinguish between contagious and infectious diseases.

AGRICULTURE

1. Name (a) *three* distinct breeds of dairy cows

and (b) *three* of beef cattle, and indicate the coloring of each of these breeds. (6)

2. What is the typical distinction between dairy and beef cattle in respect to (a) form, (b) temperament, (c) suitable ration? (6)

3. What is the most obvious difference between the teeth and between the digestive processes of cows and horses? (4)

4. State precisely the precautions that must be taken from cow to consumer, to keep milk clean. (6)

5. Name (a) *three* breeds of hens that are noted for laying, (b) *three* noted for meat production, (c) *three* noted for general utility. (9)

6. Describe a suitable house for hens in respect to (a) location, (b) light, (c) ventilation, (d) fixtures, (e) construction materials. (A lettered drawing can be used to advantage.) (10)

7. Name *five* common birds of New York and state definitely in what respects they are useful or harmful to agricultural interests. (5)

8. Distinguish between the robin and the English sparrow in respect to (a) color markings, (b) food, (c) nesting habits. (6)

9. Name a gnawing insect harmful to crops, that you have specially studied, describing (a) its size, (b) its color markings, (c) its method of travel, (d) the distinctive stages of its life history, (e) the stage in which it is most destructive, (f) how it is best controlled. (12)

10. Name ten common forest trees with which you are acquainted and make a model outline describing *one* of them so as to identify it to a pupil or teacher. (5)

11. How do you distinguish between a maple and

an apple tree in respect to (a) height, (b) bark, (c) seed production? (5)

12. Name from one to three varieties of each of the fruits commonly grown in New York. Underscore those that are commercially most important in your county (named). (5)

13. How is corn pollenized? (b) What is the botanic function of the "silk" of corn? (c) How many silks are there, approximately, on an ear of flint corn? (d) of dent corn? (5)

14. Explain *three* reasons for tilling the soil to promote the growth of crops. (6) (b) How would you destroy *two* noxious weeds that are prevalent in this state? (4)

15. (a) Name three *legume* crops *commonly grown* in New York. (b) Which is most valuable? Why? (6)

16. How should school work in agriculture be related to the agricultural conditions, resources and interests of the local community? Illustrate by reference to some definite section or county in this state. (Write about three hundred words.) (20)

17. Outline the plan you would pursue in assisting teachers to develop a coöperative interest between the school and the community in improving agricultural knowledge and practice. (Write about three hundred words.) (20)

18. What natural instincts and educational incentives may be appealed to in the teaching of agriculture? (10)

19. Outline a practical field or garden experiment in *one* of the following types: (1) testing fertilizers, (2) spraying, (3) ear-to-row testing, (4) hill selection, (5) treating seed for scab, smut, etc. (15) (b) For what grades would this experiment be suitable?

(5) (c) Does the experiment illustrate the principle of using a "check" or "control"? (5)

20. (a) Outline a suitable program for a district teachers' meeting at which the teaching of agriculture is to be discussed. (15) (b) What agencies within the state can be called on to furnish speakers on agricultural topics for teachers' meetings? If possible, specify a particular topic and name a person qualified to discuss it. (6) (c) What agencies within and without the state can be called on to assist in establishing a working library for the teaching of agriculture? (4)

AGRICULTURE

1. What advantages do you see in teaching agriculture in high schools? 2. Outline your idea of how agriculture should be taught in high schools. 3. Define the following terms: Mulch, green fodder, green manure, gypsum and nodules. 4. Explain the system of dry farming. Where is this system used? 5. What is the San Jose scale? How should trees be treated that are afflicted with this scale? 6. What are insecticides? Name two. 7. How many pounds of the following seeds make a bushel in Ohio: Wheat, oats, corn, potatoes, and beans? 8. Who is the State Supervisor of Agriculture in your district? What are his duties? 9. What is the Babcock milk test? How is this test made? 10. For what purpose is the Bordeaux mixture used? How is this mixture prepared?

AGRICULTURE

1. What advantages do you see in teaching agriculture in the rural schools? 2. Outline your idea of how agriculture should be taught in the elementary schools. 3. Define the following terms: Subsoil, hu-

mus, ensilage, formalin, and seedling. 4. What is meant by propagation of plants? Explain the process of layering. 5. Explain the process of fertilization in corn. 6. What have Dr. S. M. Babcock and Luther Burbank done to promote agriculture? 7. What is meant by a model farm? A model farmer? 8. Give five rules that you would observe in transplanting a tree. 9. Name five varieties of trees that are suitable for planting on school grounds. Why are these suitable? 10. Who is the State Supervisor of Agriculture in your district? What are his duties?

CIVIL GOVERNMENT

1. Write about the work of the recent special session of our National Congress. 2. Give the duties, term and salary of a member of the Supreme Court. Of a congressman. 3. In what ways have English laws and customs affected our laws and government? 4. Name some great national compromises and tell what were the issues that were involved. 5. Write briefly of the government of a township. 6. Define eminent domain, patent, copyright, bill of attainder, party government. 7. What limits the powers of congress? What authority is the final interpreter of the acts of congress? 8. Mention all the sources of state revenue. Name the items of expenditure. 9. Describe the different ways in which a bill may become a law.

PHYSICS

1. Name and define five properties of matter. 2. What is the difference between inertia and momentum? Between mass and weight? 3. Draw and explain the siphon. 4. Draw and explain the still. 5. Define sound, music, refraction, critical angle, work,

and focal length of a convex lens. 6. Describe how you test for two kinds of electrification. 7. How does the dynamo produce an electrical current? 8. Give the theory of heat. 9. Describe with a diagram, the microscope. 10. How may it be shown that air has weight? That it has elasticity? That it has compressibility?

THEORY AND PRACTICE OF TEACHING

1. Define consciousness, memory, imagination, percept, concept, and sense-perception. What psychical elements are involved in sense-perception? 2. What would be the condition of the man with only presentative and representative powers? Distinguish between corporal and psychical feelings and state what is included in each. 3. Define and distinguish between intellectual power and skill. Distinguish clearly between science and art in teaching. How do you comply with the law in reference to scientific temperance instruction? 4. What do you understand by the term "common sense didactics"? Define good discipline and state some of the ways by which it may be secured. What is the relation between interest and attention? 5. State the most essential factors in the school and then the most essential elements within the factors stated. Define habit and state how they (sic) may be cultivated and controlled.

VI

TEACHING PUPILS TO EXECUTE

1. In learning to ride a bicycle, would it be well for a boy to practise each elementary process for several weeks before he should attempt to execute the complex act? Will he make greater progress if he endeavors to ride from the beginning?

2. In learning to whistle, would it be advisable for a child to master the elements of the act before trying the act itself? Why?

3. Discuss the following: "In order that one may think clearly and effectively, he must have such command of the means of expression that he can employ them without conscious effort." Does the child's thinking power grow parallel with his acquisition of the instruments of expression so that they can be used automatically?

4. If the principle presented in Exercise 3 be a sound one, show how it applies to the mastery of the native tongue in its spoken form. Is the sequence in one's thought apt to be broken when he can not easily find words in which to express himself? Why?

5. State in exact detail the processes in consciousness when a child is striving to express a thought, but he can not remember the appropriate words therefor, nor can he portray the thought through gesture.

6. If you are an American, and have studied a foreign language, say whether you can think clearly and effectively when you attempt to express yourself in the foreign tongue. Describe your experience in detail.

7. Would it be of assistance to a pupil in learning to spell to write words always very slowly and carefully, pronouncing each letter while writing it? Why?

8. Would it be of advantage to a pupil in learning to spell to analyze each word phonically before writing it?

9. Would it be a good method in teaching spelling to require pupils to write all their words with proper diacritical markings?

10. What method would you advocate in the study of a spelling lesson by a class of twenty pupils in order to make the strongest appeal to different types of imagery?

11. Will it assist a pupil in learning to speak a foreign

tongue to write out all the words he uses, keeping his speaking and writing ability parallel?

12. Suppose a pupil is required to learn a selection to be recited before the school. Should he devote most of the time at his disposal to *writing* it? Why?

13. If a pupil were preparing himself for a position as bookkeeper in a grocery store where he would need constantly to perform multiplication processes, would it be most advantageous for him constantly to recite the multiplication tables orally in school? Why? What place should so-called "mental arithmetic" have in his preparatory training?

14. Do you now write the same style of hand that you were taught when you were a pupil in the elementary school? If not, what led you to change?

15. Which should be emphasized at the outset of a child's learning handwriting,—neatness and technical accuracy, or speed and automatic execution? Can neatness and speed be secured at the same time?

16. Should a left-handed pupil be made to use his right hand when writing? Why?

17. Are our neatest writers our clearest and most original thinkers? Give definite, concrete instances to illustrate your answer.

18. Is there any correlation between the quality of the handwriting and the mental attainments of pupils in the elementary school? In the high school? Nothing but concrete evidence will be acceptable in answer to this question.

19. Do you think a child would master the technique in a subject like penmanship if the teacher paid little attention to the matter? Would he acquire it as he acquires the mother tongue,—by imitation?

20. Comment on the following lesson in writing: "Copybooks, pens, and ink were distributed. The teacher then began to count. At *one* the pupils opened their copy-books; *two*

picked up their pens; *three* dipped them in the ink. Then the teacher began again to count *one, two,* etc., and each pupil wrote one letter for each count."

21. Comment on this examination in orthography:

1. Define censor, accumulate, decease, gentian, feud. 2. Mark so as to show proper pronunciation: Force, usage, apricot, cyclone, auricle, route, lose, deference, calendar, and fairy. 3. Define suffix and give two or more rules for the use of suffixes. 4. What is a word? What is the science of words? 5. When would you have the pupils learn correct pronunciation? How teach it to them? How teach pupils to break up the habit of pronouncing a word wrong? 6-10. Spell: Gauge, cymbal, acquaint, helm, irrevocable, disguised, persevere, suburb, ensuing, onyx, laboratory, besiege, essentials, intuitive, encore, semester, vitiate, piracy, transact, spinach, lyceum, rivalry, prejudice, rhythm, irrelevant.

22. Comment on the practice in vogue in some schools of giving all pupils written examinations in music.

23. Should girls taking sewing in grades below the high school be required to draft patterns of everything they make before they begin the actual making of a garment? Discuss the principle involved.

24. What can be said for the plan of requiring children below the fifth grade to make raffia baskets?

25. In a certain school, sewing was begun for the girls in the fourth grade. Each girl was required during that year to complete a canvas bag, upon which was worked in color all the various stitches that are ever used in sewing. No other sewing was done in school during the year, and the satisfactory completion of the bag was made a requirement for promotion. Comment on the value of this work.

VII

TEACHING PUPILS TO EXECUTE—*Concluded*

1. Comment on the following: "I like to see a person interpret music in his own way. But when we consider group performance in music, it is a different matter. The counting plan for evaluation of punctuation might be very helpful or even necessary in unison reading."

2. If you have studied instrumental music, say whether you think your skill in execution is proportionate to the time you have spent in practice. Compare what you have gained in music with what you have acquired in other subjects upon which you have spent an equal amount of time. If you have not studied music yourself, then get data relating to the above questions by observing or questioning some one who has.

3. What psychological and educational significance is to be attached to the oft-heard phrases,—"I can not play for you because I forgot my notes," or "because I am out of practice," and so on?

4. Gather reliable data bearing on this problem: Did the greatest musicians, such as Beethoven, Mozart, Liszt, and others, start in their career by giving attention to the technique of music first, or did they at the outset try to express their musical feeling, and later perfect their technique as it was required to express their feelings and conceptions the more truly and adequately?

5. It is said by persons who ought to know that the pupils trained in American schools have little interest or ability in vocal music. If this be true, what is the explanation?

6. When a pupil is beginning to learn penmanship, would it be wise to require him at the outset to write a sentence as a whole, because it is the "unit of thought"? Why?

7. When a student is beginning the study of German, would it be well to require him at the outset to pronounce three-syl-

lable words say? Why? How should one begin in teaching a novice to render correctly elementary sounds in German words?

8. Describe your experience in the study of drawing in the elementary school, mentioning the amount of time you spent in this work, the method you followed, and your present ability in this direction. Do the results in your case justify the method employed?

9. Discuss this proposition: "One can draw or paint anything which he can clearly perceive."

10. Which would you insist upon at the outset in teaching a child to draw,—accuracy and neatness in executing lines, or a portrayal—rough and crude and imperfect, probably—of the essential visual characteristics of objects?

11. Would you encourage a novice in drawing to proceed slowly and painstakingly with elementary processes in representing an object, or to work rapidly with the thing as a whole, seeking to portray only its principal phases, and not stopping to make the elements technically accurate?

12. What topics or processes in the following studies should be taught with a view to making them automatic: (a) geography; (b) history; (c) psychology; (d) physics; (e) manual training; (f) rhetoric; (g) German.

13. Should any or all of the propositions or theorems in geometry be taught so that the demonstrations can be given automatically? Why?

14. Should ethics be taught with a view primarily to develop *habits* of action, or with a view to inculcate right reasoning on ethical questions?

15. Discuss the following proposition with reference, first, to the facts in the case, and then with reference to the educational principle involved: "Most of us understand ethical conduct much better than we practise it."

16. Which of the common-school studies are predominantly

technical or formal? Which of the high-school studies are of this character?

17. How early should a pupil who has been taught to read by the word or the sentence method, be able to give all the letters of the alphabet in their proper order?

18. Respond to the following query, asked by a high-school principal: "In commercial arithmetic in the high school, I have found it almost impossible in, say, 50% to 60% of the cases to teach pupils a new and shorter method of doing an old problem. They can not learn to use the 60-day method in interest, and seem bound to find 16 2-3% of a number by calculating first 1% and then multiplying that by 16 2-3. What is the trouble?"

19. Comment on the following state examination in music:

1. Name one idea that should be developed in each of the first four years of teaching music in the public schools. Describe briefly how you develop one of these. 2. What is your method of bringing up a child that is backward in music? One who is careless and yet can learn music easily? 3. Write the ascending scale of D minor in Harmonic and Melodic form. 4. Name four of the masters in music and tell of what nation each was a native. Name four authors of vocal music and name a selection of each. 5. Explain each figure of the meter signature fully as to a class. 6. Write the relative and absolute pitch names in the key of D. 7. What are bars? A time signature? Triple time? A tie? Accent? A chord? 8. How much individual singing do you have your pupils do? Why? 9. What is meant by the science of music? The art of music? By musical idea? 10. What is the cause of faulty intonation? How correct it? What are monotones? How remedied?

VIII

TEACHING THE ARTS OF COMMUNICATION

1. Give three examples of dictionary definitions of words which would be fully intelligible to a novice, and which are true and adequate definitions of the words in question.

2. Give three examples of dictionary definitions of words which would be unintelligible to a pupil, say in the sixth grade.

3. Give in concrete detail an explanation made by a teacher of a point in any study not understood by a pupil, which explanation explained fully, clearly, and impressively. Also give an example of an explanation, so-called, which had a contrary result.

4. Write out, without consulting a dictionary, what you think of when you hear the word "goodness". Trace the steps by which this word has come to have its present significance for you.

5. Write out in detail how you would make the following words intelligible to a pupil in the eighth grade: (a) generosity; (b) evolution; (c) overture; (d) specific gravity; (e) tariff; (f) Romanesque.

6. Write out a list of words, the meanings of which you feel you know, but yet which you can not state to your satisfaction. Explain the fact that you can not define what you believe you understand.

7. Would you employ the dictionary in schools for certain purposes earlier than for the learning of definitions? If so, for what?

8. Is the ability correctly to define a word wholly independent of an appreciation of its meaning?

9. Comment on the ease with which a boy of twelve will learn such new words as "chauffeur", "ignition", "cyclometer", "cylinder", "magneto", "carbureter", and many other long and seemingly difficult words, while he has difficulty with "nomi-

native", "subjunctive", "multiplicand", "integer", and the like.

10. Do children who live in the country, with but few companions, use language as a means of expression as readily and effectively as children who live in the city, and who have many playmates? Give concrete evidence. Avoid a merely conventional answer.

11. Among the adults you know, do those who lived in the country until they reached maturity use language as fluently and effectively as those who have lived in the city since their birth? What is the principle involved?

12. Suggest feasible methods of leading children in the elementary school to talk readily and to the point. Suggest methods also to be used with high-school students.

13. Do you enjoy expressing yourself through writing? Do your companions? Comment on the facts as you find them.

14. Discuss the following creed of a well-known teacher: "I believe it is my mission as a teacher to get my pupils to accept and to use the highest standards of English, and to prevent them from using the inelegant and crude vulgarisms of the hour."

15. What has been the attitude of your teachers in the elementary and in the high school with reference to confining your reading to "standard" literature? Would you let a child under your control read a biography of *Buffalo Bill,* or the *History of the Dalton Gang,* and the like? Give reasons for your answer.

16. Speaking of conventionality in the use of language, do linguistic scholars agree on the spelling and the pronunciation of all familiar words? Do they agree on spelling reform? Would they all approve such an expression as "It is me"? Do they agree on the use of the cleft infinitive?

17. Discuss the practice of having children learn long passages from the Bible, the meaning of which is beyond their grasp, in the belief that in later life the meaning will become clear.

18. Give a list of ten words or phrases, not mentioned in the text, which are thought by some people to be in accord with the best standards, while others regard them as slang. Give your own opinion regarding their respectability.

19. Why do college students use slang as readily and copiously as they do in all parts of our country? If you could have your way, would you suppress college slang? Why?

20. Would you permit pupils in the elementary or the high school to use the language of the street in the class-room? Why?

21. Are the students who make the best records in the regular work of the school or the college the most ready to invent and to employ slang phrases? Or is it the other way 'round? Get precise data on this point.

22. Do city children use more slang than country children? Why? What is the case with regard to adults?

23. According to your observation, can the graduates of the elementary or the high school speak freely and to the point when they are placed in public situations? Are those who have been in school for many years freer and more effective in their public speaking than those who have not had much schooling?

24. Is it possible that the dread of "speaking pieces" before the school may give a pupil such a distaste for similar activities that he never can become an efficient public speaker?

25. Might the dramatizing of favorite stories be made a satisfactory substitute for individual recitation? What is the value of having debates on live questions in which the children are interested, and on which they are informed?

26. Does the insistence of teachers of English composition upon "Purity, Propriety, and Precision" in words have a tendency to develop clearness in thinking, or does it tend to inhibit somewhat the thinking process, and stifle originality? Give concrete evidence illustrating the principle.

27. Are "memory gems" as learned by children in school

of any real worth? Discuss the plan of having children learn a large amount of poetry and prose of classic value for the purpose of enlarging the vocabulary, and also for the purpose of giving a feeling for melody and rhythm in language.

28. Which method of memorizing do pupils habitually follow, the "whole" or the "part" method? What implications are contained in your answer?

29. How would you meet the need that exists in every school of having definite instruction and practice in the proper and effective use of the voice?

30. Comment on the rule insisted upon by many teachers, that in recitation each pupil must answer every question in complete sentences.

31. Do children in grades below the high school take any account of style in prose writing? Are they interested mainly in the form or in the content of what they read? How may a taste for good style be developed?

32. Comment on the following testimony from an elderly man: "When I was a boy back East, we read and analyzed every sentence in Book One of *Paradise Lost*. Nothing ever did me so much good!"

33. Justify if possible the placing of Burke's Speech on Conciliation or Emerson's Essay on Self-Reliance in the list of required readings for college entrance.

34. Comment on the following examination in grammar from the standpoint of its putting emphasis on efficiency in expression:

1. Explain the difference between the etymology and the syntax of words. 2. Are infinitives and participles classified as parts of speech? 3. What is your opinion of how the infinitive and participle should be classified? 4. Show by an outline that you understand the classification of the adjective. 5. Show by sentences the difference in modification of adjectives and adverbs. 6. Show the value of analysis and synthesis in the study of grammar. 7. Write a simple sentence.

A complex sentence. A compound sentence. 8. Make a list of twenty propositions. 9. Write the following words in sentences (first, as nouns; second, as adjectives; third, as verbs): Stone, block, and hurt. 10. Analyze or diagram: It is worth the effort to be honest.

35. Comment on this state examination set for a teacher's certificate:

READING

1. Name two or more good systems of teaching reading to beginners. Which do you use? 2. What can you tell about the proposed constitutional convention? What are some of the reasons for holding it? 3. Why are these persons so prominent in the news of the day: Woodrow Wilson? La Follette? Ella Wheeler Wilcox? Judson Harmon? Madero? The present Chief Justice of the United States Supreme Court? 4. What is the earliest historical event that occurred in your county of which you have authentic information? The earliest event in the history of our state? 5. Give your plans for overcoming the fault of mere word calling by a pupil in his oral reading. 6. When was your county settled? By whom? What is its area? Its population? What are its leading productions?

IX

TENDENCIES OF NOVICES IN TEACHING

1. As you look back over your school work, what seem to you to be the chief defects therein? How would you modify your school course if you were going over it again?

2. What sort of teachers have left the most lasting and the best impression upon you,—those who were just beginning their professional work, or those who were practised in the business.

3. Mention some good qualities in novices which they are

likely to lose as they become familiar with their work, unless they keep constantly on their guard.

4. Have you known a novice in teaching who had prominent faults in the beginning of his career, but who outgrew them as he gained experience? Did he discover his shortcomings without criticism or suggestion by others?

5. Are there "born teachers"? Are they the same as "teachers by the grace of God"? Describe such teachers, showing how they differ from those who have been "made" by special training.

6. Look up the record of three of the strongest teachers you know now, or have known at any time. Were they specially trained for their work? What characteristics made them strong and capable?

7. If you could control the certification of teachers, what would you require for a certificate entitling the holder to teach in a rural school? In a city elementary school? In a city high school? In a township high school?

8. Comment on the following: "I like the emphasis placed on other than verbal criteria of the reactions of pupils, but I think it may be overdone. While I may be able to tell unmistakably by visual evidence whether I have the attention of a class, I have no assurance that they are getting points in their proper perspective, or that they are getting the *proper* points at all, or that they are getting any points if the discussion be abstract or otherwise difficult. I have often followed a discussion so closely that I have missed its organization and progression. I always get the most when occasionally I withdraw my attention for brief intervals from the speaker, or pause in my reading a minute for reaction."

9. What factors or conditions may cause a teacher to be timid and halting before his class? In your answer, take account of the teacher's health, etc., as well as the character and attitudes of his pupils.

10. Describe a so-called "egotistic" teacher. What influ-

ence will such a person have on a typical group of pupils? Be concrete and specific in your answer.

11. Describe a "sarcastic" teacher. Give a specimen of harmful sarcasm in a school-room, indicating all the circumstances of the case. Do you know of instances in which sarcasm in the school-room has proved of service?

12. Do you think the following point is important: "It seems to me there is one very common failing in young teachers especially. It is a lack of frankness toward superiors regarding difficulties in discipline or actual teaching. They seem to feel that a confession of needs is a confession of weakness, and likely to injure their standing. This is a very dangerous condition of affairs in small schools where adequate supervision is impossible, and in larger ones where the high school has a teaching principal and a superintendent who devotes most of his attention to the grades. Consequently things often come to a 'pretty pass' before the superior finds out the conditions. I have some specific cases in mind which, in my own experience, have driven in this point *hard*."

13. Is it a wise use of time in class for the teacher to take one-fourth or one-half of the period for the purpose of carefully assigning the next lesson, and indicating at the same time the best way to prepare it? Comment on this sort of an assignment given hurriedly after the closing bell has sounded: "Take the next three pages."

14. Is the following case a typical one: "It was reported of a certain teacher that she conducted a very orderly school. 'Her pupils maintain such good positions; the boys never have their hands in their pockets; the girls never put their elbows on the desk,' the people said. Upon visiting the class, the report was found to be true, but it was also discovered that the teacher had made an absolute rule requiring upright positions, both feet on the floor, hands on the desk, *all the time*. If one of the pupils became tired or changed his position, he was immediately called to order. Thus, in an intensely

interesting discussion, for the teacher was very strong in her subject, a bright boy, disagreeing with what another pupil had said, turned about in his seat to face the class, ran his fingers through his hair, while his face showed his desire to express his idea on the subject. Quick as a flash came the teacher's reproof for his position, which the boy immediately corrected; but all his enthusiasm was gone. Embarrassed by the reproof, and the attention it had gained him from the class, he was unable to find words to express the idea he had in mind, and sat down with a sense of having failed."

15. Comment on the following testimony from an experienced and successful teacher of English: "When I began to teach composition, I tried to teach six rules of punctuation in one day to a freshman class in high school. Now I spend two days preparing for one rule, and on the third, I let the class frame it from the experience they have had working with sentences on the two previous days."

16. What common faults in inexperienced teachers do the following incidents illustrate?

(a) A teacher of a second-year high-school class studying Wordsworth's poems gave one recitation period of forty minutes to a discussion evidently derived from college lecture notes on the difference betwen Romanticism and Classicism. She illustrated her remarks by passages from Pope and Wordsworth.

(b) In a high-school freshman class in English studying Irving's *Christmas Eve*, a period of forty minutes was spent in questions and answers on the traits in the character of Mr. Bracebridge. The teacher merely asked questions based on the text, and the children found the answers in the text.

17. Comment on the following assignment for a seventh-grade geography class: "Starting at the mouth of the Mississippi river, look up all the cities located on this river, and find out all the interesting things about each one either in the textbook or the cyclopædia. Be able to sketch on the board an

outline map of the United States, showing the location of this river and these cities."

18. In the *Teachers' College Record* (Teachers' College, Columbia University) for September, 1910, is a stenographic report of a lesson in high-school English. The report is said to be an exact reproduction of the questions asked by the teacher, and his remarks, and the answers given by the pupils. Comment on (a) the character of the questions and the teacher's remarks as to their content and their form, and (b) on the responses from pupils. (Only the first half of the lesson is here given.)

Teacher. Before we begin to talk about modern ballads, let's see what you got from your first impression of the old ballads last time. In the first place, give four or five subjects that the old ballad writers were especially interested in.

Pupil. Fighting, principally, and some romance.

T. What do you mean by *romance?*

P. *Romance*—that is all.

T. People meant different things—fighting, or love—do you mean *love?*

P. No, fighting—romance. (Teacher writes on board "romance".) That is about all I know, in the first—old ballads: oh, yes, one gruesome one, about c—.

T. Corbies?

P. Yes.

T. Horror, perhaps.

P. Yes.

T. (Names special pupil).

P. It only happened once,—lovers separated and met again.

T. Yes. (Writes "Fighting, Tales of Horror, Shipwreck, Parted Lovers.") Is that a fair list? I should think so. Let us see about the spirit in which they were written, that is, the kind of qualities the people in those ballads showed, and the kind of qualities in human nature people of that day liked.

P. I think bravery.

T. (Writing "bravery".) Anything else?

P. A hero and a villain.

T. Hero and villain; in other words you take sides?

P. Yes.

T. What other qualities besides bravery?

P. Treachery, of the kind in the ballad of *Johnnie Armstrong.*

T. Yes, and the hero shows what quality?

P. He believes in the king even when he is summoned before him.

T. Good faith on one side, and treachery on the other. Anything else?

P. Honor.

T. Honor, yes. (Writes "honor".)

P. A great deal of honor among themselves.

T. Loyalty to each other; and as regards their enemies, what?

P. They used to fight for fun, and they had certain rules; they were not really angry, they had to keep certain rules.

T. In other words?

P. They couldn't do just as they wanted to.

T. There were rules of honor even toward your enemy, a sort of amateur spirit.

P. Courtesy to their enemies.

T. Courtesy,—and perhaps we might say this includes being true to the rules. Could we say anything about the style in which these poems were written, kind of language, and kind of verse form?

P. Could be put to music.

T. Easy to sing, for one thing?

P. Yes.

T. Complicated tunes, or simple?

P. Simple.

T. How about the words, the English?

P. Old English and Scotch.

T. Old English and Scotch; easy or hard to understand?

P. After you have read two or three, I don't think it is hard.

T. If you had been an old Scotchman of those times, should you say they were written in hard or easy language?

P. Simple,—quaint.

T. Simple and quaint—old-fashioned. Let us turn to the ballads you had for to-day; see how they compare with these old ones. The first one, *Lord Ullin's Daughter*—as regards the subject matter, is it the kind of story you think would appeal to ancient writers?

P. It seems so; this one was about an elopement, they seem to write that kind of story.

T. Anything else?

P. Shipwreck.

T. Do you think the old ballad writers would have been satisfied with the way the story came out?

P. I don't think so; they liked to see their side win; the lovers won in this case, but were drowned; I don't think they would have liked it that way.

T. If they are going to get away from the father, they ought to get away clear. I think that is true; things end simply in the old ballads, it is an out-and-out tragedy or a happy ending.

P. They had some death, like *Johnnie Armstrong,* where the hero was killed.

T. How was he killed?

P. By treachery.

T. Was there any here?

P. No.

T. Were they killed through anybody's fault, or by accident?

P. By accident.

T. How is it in the old ballads?

P. In the first stories they were not,—a shipwreck.

T. But in most cases it is a matter of somebody's treachery. In *Sir Patrick Spence* who gets drowned?

P. The Scotch nobles.

T. There it is the lords and all those other fine noblemen. As far as the style goes in *Lord Ullin's Daughter,* should you say that the story goes rapidly, as rapidly as possible, or should you say that if an old ballad singer were telling the story, there is something that could be left out?

P. I think so.

T. Can you see any group of verses that could be left out without breaking the story up?

P. I think where it described the boat (reads) :—

"The boat has left a stormy land,
A stormy sea before her—
When, oh! too strong for human hand,
The tempest gather'd o'er her."

Those descriptions could be left out; and (reads) :—

"For sore dismay'd, through storm and shade,
His child he did discover:—
One lovely hand she stretch'd for aid,
And one was round her lover."

T. You think the picture of how she looked in the boat does not count?

P. I like it, but it could have been left out.

T. The old ballad singers would have left out that part. Are there things in the earlier part of the poem that could be left out if you just wanted the story?

P. The first verse.

T. Better if they got started at once, perhaps. Miss Weiss?

P. The third verse:—

"And fast before her father's men
Three days we've fled together,
For should he find us in the glen,
My blood would stain the heather."

He says right after that that the horses are right behind him, so he could have left that out.

T. He spends too much time in talking to the boatman, that is true.

P. The seventh verse:—

"By this the storm grew loud apace,
The water-wraith was shrieking;
And in the scowl of Heaven each face
Grew dark as they were speaking."

T. You can't help wondering why they didn't get in the boat, and stop talking. The old ballad writers pared it all down to nothing but the story. Turn to the next one,—*Lady Clare;* would that have pleased the old ballad writers?

P. I think it would have. It is just the kind of love story they liked,—it all turned out well.

T. Turns out well in the end; and in it the lovers show what kind of qualities?

P. Faithful.

T. You like that?

P. Yes.

T. The sort of things anybody would like, all the admirable qualities of a good love story. I wonder if any one noticed the language of this poem, anything that would show that Tennyson was trying to imitate the language of the old ballads?

P. "I trow they did not part in scorn."

T. "I trow"—that sounds old-fashioned. Anything else?
P. The way he brings in the nurse:—

> "In there came old Alice the nurse,
> Said, 'Who was this that went from thee?'
> 'It was my cousin,' said Lady Clare;
> 'To-morrow he weds with me.'"

and "thee" and "thou."

T. How about the word "Said"; has that any subject?
P. "Alice the nurse" is subject of both *came* and *said*.
T. Yes: anything else?
P. The last of that verse, "To-morrow he weds with me."
T. That sounds old-fashioned; anything else?
P. Some of the repetition.
T. What line?
P. "Are ye out of your mind, my nurse, my nurse?"
T. And "Yet here's a kiss for my mother dear,
My mother dear, if this be so,"

sounds like the kind of repetition a man would make on a guitar, or something like that.

> "'Play me no tricks,' said Lord Ronald,
> 'For I am yours in word and in deed.
> Play me no tricks,' said Lord Ronald,
> 'Your riddle is hard to read.'"

It comes again and again. When you come to *Lucy Gray*, a poem which was very famous, and which is, perhaps, a little hard to get the real spirit of at first; did any one feel especially attracted by that? Miss Graves? What did you like about it?

(The lesson was continued for about twenty minutes longer.)

X

THE EDUCATION OF GIRLS

1. Discuss the following: "Girls who graduate from college and from the high school have, as a rule, little interest in home-making." Is there any direct reliable evidence bearing on this problem?

2. What subjects ordinarily taught in the high school are, when pursued with understanding, of marked service to a girl who is required to manage a home. Show just how these studies may be of service to her.

3. Write out a statement showing what "making a home" really means, or ought to mean.

4. Should a girl while in the elementary school pursue studies different from those pursued by the boys? Why? Discuss this same question in respect to the work of the high school.

5. Point out the advantages and the disadvantages of coeducation in (a) the elementary school; (b) the high school; (c) the college.

6. Would it be desirable in an ungraded rural school to attempt to give the girls a somewhat different training from the boys? Why?

7. Should the elementary school endeavor to prepare a girl for other duties and responsibilities than those involved in making a home? Be specific. What should the high school do in respect to this matter?

8. Show in what particular the "highly educated" women in the community in which you live are better adapted to their environments, physical and social, than those who are not so highly trained. Are the former more contented with their lot than the latter? Are they of greater service to the people of th community?

9. What seem to you to be the effects upon the health of

women of high-school and college education? Exact data are needed here, if you can find them.

10. Do you think a girl should pursue any study simply because of the mental discipline she may get from it? Is it any different with a boy?

11. Show how some or all of the following studies may be made directly applicable to the special needs of girls: Latin; botany; chemistry; physics; rhetoric; civics; geometry; English literature; French; bookkeeping; typewriting.

12. Is drawing a valuable study for every girl, even though she may have no particular talent in this direction, or may never produce anything of value in this line outside of school?

13. According to your observation, are girls who study domestic science in the high school more helpful at home than those who do not study it? Do they grow to like house-work on account of this training?

14. Has the introduction of domestic science in the schools helped to solve the servant-girl problem? Has it raised the social status of those who do housework?

15. Discuss the plan of having a course in millinery given in every high school in connection with work in sewing.

16. Ought there to be specially prepared text-books for girls in such subjects as chemistry, physiology, and physics?

17. Comment on the following. (Tyler, Growth and Education, p. 172.) "The teachers in our women's colleges are learned, intelligent, very highly cultured, and ambitious. They have been eager to prove that the average woman has more intellectual ability than any man. This question any man of any experience will unhesitatingly and emphatically answer in the affirmative, without the evidence of a college diploma or degree of Ph. D."

18. In certain government schools for Indians, sewing-machines are but little used, improved laundry apparatus is employed for only a part of the washing, and cooking is done on old-fashioned wood-stoves instead of up-to-date ranges. Is

this condition, a result of lack of funds in some cases, a very great disadvantage to the pupils?

19. When a school man says that one of his primary aims in the teaching of household arts is the securing of direct vocational efficiency, is he in accord with contemporary educational thought on this subject?

20. If you were in charge of a system of schools, would you hold public graduating exercises and grant diplomas at the completion of the eighth grade? Would you have graduating exercises in the high school? If so describe any rules or regulations you would make for the control of excessive expenditures for dresses, etc.

21. How would you deal with the problem of dancing on the part of girls who are students in the grammar school or the high school? Would you limit the number of "parties" a girl might attend during the school year? Why? How?

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In selecting the following lists of references for further reading, the needs of the practical teacher have been kept constantly in mind. It has been the aim to suggest helpful books and articles which are easily accessible, and to this end considerable use has been made of the more important educational and psychological magazines and the Addresses and Proceedings of the National Education Association (previous to 1907 the National Educational Association), which are usually found in any general or professional library. In deciding upon any particular reference, the topics presented in the Exercises and Problems were kept in mind especially, although it was the aim to suggest not less than three references relating to each principle discussed in the text. Inasmuch as this book does not attempt to consider questions of the curriculum or any phase of the history or philosophy of education, no reference has been made to readings relating to these fields. Some of the references are designed wholly for those who have had no previous study of psychology or education, and they are indicated by (E), while others, denoted by (A), are more advanced, and may be read to greatest advantage by those who are familiar with the elements of biology, psychology, and education.

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